The Economist

The death toll from delays in A&E

A new theory of the firm

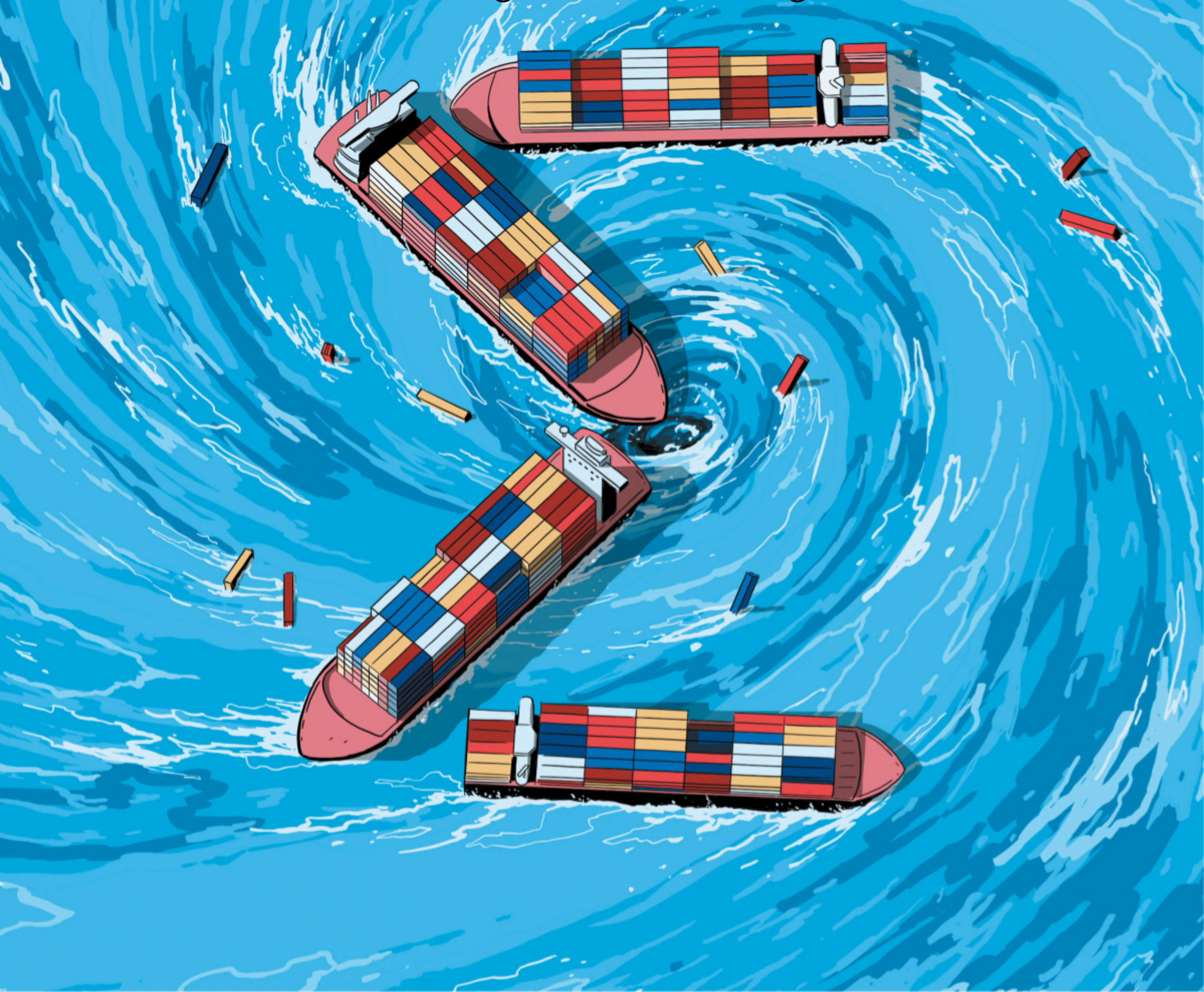
Age of the grandma

Napoleon's missing toothbrush

JANUARY 14TH–20TH 2023

ZERO-SUM

The destructive logic that threatens globalisation



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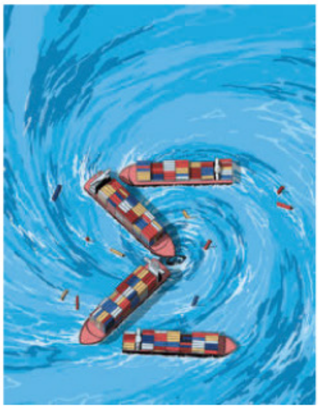

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The Economist

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to take part in *"a severe contest between intelligence, which presses forward, and an unworthy, timid ignorance obstructing our progress."*

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Thousands of supporters of Jair Bolsonaro, who was **Brazil's** president until narrowly losing an election in October, stormed the presidential palace, Congress and the Supreme Court in an attempted insurrection. They smashed offices and attacked journalists and the police. Luiz Inácio Lula da Silva, the new president, put security in Brasília, the capital, under the control of his government. Mr Bolsonaro, who has been in Florida since December, distanced himself from the violence. But a few days later he posted a video which once again questioned the validity of the election result.

Protests continued to rage in **Peru**, following the ousting of Pedro Castillo, a left-wing president, after his attempted "self-coup" in December. At least 19 people died this week. Dina Boluarte, who is now president, is among several politicians to be investigated by the attorney-general's office for "genocide". She denies any wrongdoing.

Mexico's security forces arrested Ovidio Guzmán, a son of "El Chapo", the former head of the Sinaloa drug cartel. At least 29 people were killed in the ensuing violence. The arrest may help appease critics of the soft approach to organised crime taken by Andrés Manuel López Obrador, the president, which has included defending the release of Mr Guzmán after he was captured in 2019.

Joe Biden met Mr López Obrador and Justin Trudeau, his Mexican and Canadian counterparts, to discuss further economic integration at a summit in Mexico City. The gathering of the **North American** leaders was marked by friction on other issues. Mr Biden wants Mexico to do more to tackle drugs flowing north. Mr López Obrador criticised the United States for its "disdain" for Latin America. The US and Canada expressed concern about Mexico's nationalistic energy policy.

Mr Biden said he was surprised by the discovery of ten **classified documents** at an office he had used before the start of his presidential campaign. The papers were found on November 2nd last year, shortly before the midterm elections, and were handed to the National Archives the following day. A second batch of documents was subsequently found at a different location. The news comes five months after the FBI removed a trove of sensitive material from Donald Trump's home in Florida.

Ayes to the right

America's **House of Representatives** adopted new procedural rules proposed by hard-right Republicans in exchange for supporting Kevin McCarthy as speaker. Mr McCarthy was elected to the job on the 15th round of voting. The new rules make it harder to reach agreement on spending and allow just one congressman to call a vote to oust the speaker. Democrats said they were crafted for "MAGA extremists".

Dozens of countries placed restrictions on travellers from **China**, as covid-19 continued to tear through the country. In retaliation, China stopped issuing short-term visas to people from South Korea and Japan, which had imposed some of the most stringent measures. The WHO said China's official statistics under-represented the true impact of covid in the country.

Pakistan's government held talks with the IMF in an effort to restart a bail-out programme for the country. The IMF wants Pakistan to raise fuel prices and taxes, which the government is reluctant to do. Amid warnings that Pakistan's foreign-currency reserves cover less than a month's worth of imports, **Saudi Arabia** said it may extend an $11bn rescue programme of investments and loans to the government.

Iran executed two more protesters. The men said they had been tortured into falsely confessing that they had killed a member of the security forces during protests against the government last year. At least 100 people have been sentenced to death or charged with capital offences in connection to the unrest.

Annual inflation surged to almost 22% in **Egypt**. The Egyptian pound has sunk to a new low against the dollar after the central bank devalued the currency for the third time in ten months, which will increase pressure on the bank to raise interest rates.

Uganda's worst **Ebola** outbreak in two decades has officially ended. The virus, which usually kills roughly half the people it infects, took 55 lives in 142 confirmed cases before it was contained.

Rebels in **Ethiopia's** northern region of Tigray have begun handing over heavy weapons under a peace deal struck in November. The two-year civil war has claimed hundreds of thousands of lives, mostly from starvation and illness due to a blockade of the region by government forces.

West Africa and the Sahel face "unprecedented" security and humanitarian challenges, according to the UN. Jihadists, criminal gangs and other armed groups have forced the closure of more than 10,000 schools and 7,000 clinics in the region.

Nigeria's independent electoral commission said that a general election scheduled for February 25th may have to be postponed because of a wave of attacks on its offices.

The West appeared to be stepping up its supplies of weapons to **Ukraine**. America, France and Germany all indicated that they are sending various types of infantry fighting vehicles. But what Ukraine is really after are main battle tanks. Reports say that Britain might be preparing to send a limited number of Challengers; German-made Leopards or American Abrams would be better.

Vladimir Putin replaced **Russia's** commander in Ukraine, putting the armed forces' chief of staff, Valery Gerasimov, in charge of the war and demoting Sergei Surovikin, known for his brutal tactics, to become his deputy after just three months in charge.

To the barricades!

The French government announced reforms to the state pension system, including an increase in the official retirement age from 62 to 64. **France** would still have the lowest retirement age in any of Europe's big economies, but the policy is incredibly unpopular. Unions have called nationwide strikes.

Britain's government, facing a wave of industrial action, introduced a bill that would require unions representing railway, ambulance and fire-service workers, among others, to provide a minimum level of cover during strikes. Even if passed in Parliament the legislation won't come into force until later this year, but the bill has further angered those who are currently on strike. Unions claim the new law may be illegal.

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Sustainability is integral to business practices across the globe. Consumers, investors and – in some places – regulatory bodies are pressurising enterprises to hit ever-more ambitious carbon-reduction targets.

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GDP forecasts
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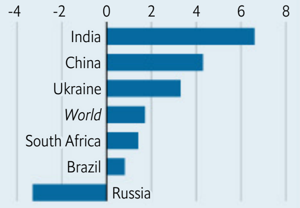


Source: World Bank

The World Bank sharply reduced its forecast of **world economic growth** this year, to 1.7%, which would be the third-weakest pace in nearly three decades, behind the global recessions of 2009 and 2020. The bank said the lower forecast reflected a "synchronous" tightening of monetary policy and continuing disruption caused by Russia's war in Ukraine. It warned that small countries reeling from the pandemic and the effects of Russia's war could see permanent losses to their output. Assuming that the war does not escalate, Ukraine's economy is expected to grow by 3.3%, but only after a third of its GDP was wiped out last year.

Jerome Powell said the **Federal Reserve** would not adjust its polices to tackle climate-change issues, and would instead "stick to our knitting" of making judgments related to inflation and supporting the job market. Some central banks take climate change into consideration in their deliberations. But the Fed's chairman thinks that this would undermine support for its decisions, especially when there are tough calls to make on interest rates.

The **euro zone's** inflation rate dropped to 9.2% in December from 10.1% in November, helped by a sharp fall in the cost of energy. An exceptionally mild start to the winter in Europe has helped push wholesale gas prices down to where they were before the start of Russia's invasion of Ukraine, which should help ease inflationary pressures further. Along with positive news about German factory output and lower unemployment, the euro zone has had an optimistic start to the year, allaying fears of stagflation.

As South Africa struggles through its worst-ever blackouts, Cyril Ramaphosa, the country's president, warned that the energy ministry could end up taking control of **Eskom**, the state-owned electricity provider. The threat came after allegations emerged that an attempt was made to poison Eskom's chief executive in December, when he submitted his resignation.

"Restore the magic"

An almighty proxy battle was shaping up at **Disney**, after the company said it did not want to give Nelson Peltz a seat on the board. Mr Peltz, a prolific activist investor, thinks Disney has paid too much for some acquisitions, such as 21st Century Fox in 2018, and wants a successor named for Bob Iger, who was recently re-installed as chief executive.

Goldman Sachs started a cull of around 6% of its employees, its biggest cost-cutting exercise since the financial crisis of 2007-09. The bank is anticipating a slowdown, but it had also kept on workers during the pandemic that it would normally have let go, leading to higher staffing levels.

The upheaval in the crypto industry following the bankruptcy of FTX continued to spread, as **Coinbase**, another exchange, said it would cut 950 jobs, about a fifth of its workforce, in order to "weather downturns" in the market.

Ant Group, a Chinese fintech giant, confirmed that **Jack Ma** is to give up control of the company and that several agreements that boosted his influence will be terminated and his voting rights vastly reduced. The announcement will please the Chinese government, which forced Ant to abandon an IPO in November 2020 at the start of its crackdown on tech companies.

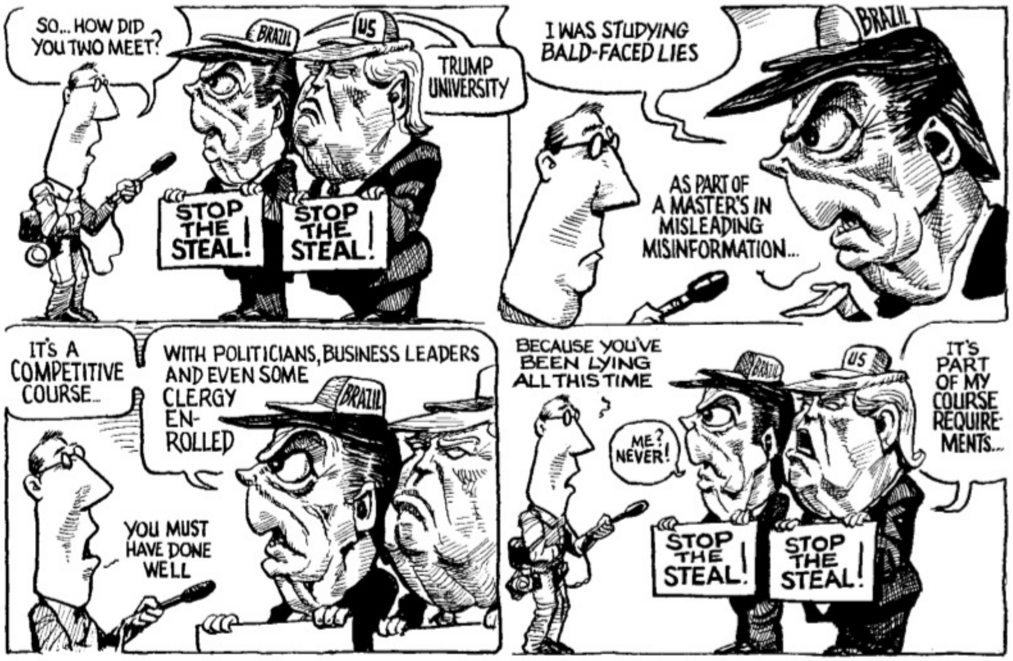
Since its launch last year, supporters and critics alike say that **ChatGPT** has had the ability to disrupt publishing, education and even the use of search engines. **Microsoft** is now reportedly considering making a $10bn investment in OpenAI, the startup behind the generative artificial intelligence chatbot. ChatGPT creates text from simple instructions. New York City has banned it from schools, in case students use it to write homework.

Albertsons reported an 8% rise in sales for its latest quarter, year on year. Last October Albertsons agreed to merge with Kroger in a $24.6bn deal, but the combination of two of America's biggest supermarket chains has attracted intense scrutiny from competition regulators.

Rolls-Royce had a record year in 2022, selling 6,021 vehicles, the first time in its 118-year history that annual sales have exceeded 6,000. The carmaker, which is owned by BMW, said that this was despite a drop in orders from Russians amid the war in Ukraine.

Don't dine with me

The market for high-end fine dining could face a shake-up, with the news that **Noma** is to shut its doors from the end of 2024. The Copenhagen hotspot, famed for its tasting menu of Nordic cuisine (reindeer heart and slightly wet hay are some of its delights), has been rated the world's best restaurant several times. Although customers fork out $800 for the tasting menu, René Redzepi, Noma's founder, thinks the industry is unsustainable. Noma will instead become a cooking laboratory, with occasional pop-up nights.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Zero-sum

The destructive logic that threatens globalisation

Since 1945 the world economy has run according to a system of rules and norms underwritten by America. This brought about unprecedented economic integration that boosted growth, lifted hundreds of millions of people out of poverty and helped the West prevail over Soviet Russia in the cold war. Today the system is in peril. Countries are racing to subsidise green industry, lure manufacturing away from friend and foe alike and restrict the flow of goods and capital. Mutual benefit is out and national gain is in. An era of zero-sum thinking has begun.

The old system was already under strain, as America's interest in maintaining it waned after the global financial crisis of 2007-09. But President Joe Biden's abandonment of free-market rules for an aggressive industrial policy has dealt it a fresh blow. America has unleashed vast subsidies, amounting to $465bn, for green energy, electric cars and semiconductors. These are laced with requirements that production should be local. Bureaucrats tasked with scrutinising inward investments to prevent undue foreign influence over the economy now themselves hold sway over sectors making up 60% of the stockmarket. And officials are banning the flow of ever more exports—notably of high-end chips and chipmaking equipment to China.

For many in Washington, muscular industrial policy holds a seductive appeal. It could help seal America's technological ascendancy over China, which has long pursued self-sufficiency in vital areas using state intervention. As carbon pricing is politically unfeasible, it could foster decarbonisation. And it reflects a hope that government intervention might succeed where private enterprise failed, and reindustrialise America's heartlands.

The immediate consequence, however, has been to set off a dangerous spiral into protectionism worldwide (see Briefing). Build a chipmaking plant in India and the government will stump up half the cost; build one in South Korea and you can avail yourself of generous tax breaks. Should seven other market economies that have announced policies for "strategic" sectors since 2020 match America's spending as a share of GDP, total outlays would reach $1.1trn. Last year nearly a third of the cross-border business deals that came to the attention of European officials received detailed scrutiny. Countries with the raw materials needed to make batteries are eyeing export controls. Indonesia has banned nickel exports; Argentina, Bolivia and Chile may soon collaborate, OPEC-style, on the output of their lithium mines.

Economic conflict with China looks increasingly inevitable. As China became more deeply integrated into the global economy at the turn of this century, many in the West predicted that it would become more democratic. The death of that hope—combined with the migration of a million manufacturing jobs to Chinese factories—caused America to fall out of love with globalisation. Today Mr Biden's administration frets about the danger of depending on China for batteries the way Europe relied on Russia for gas before the invasion of Ukraine. Democrats and Republicans alike worry that the loss of America's lead in advanced chipmaking to Taiwan will undermine its ability to develop artificial intelligence—on which, they predict, armies of the future will rely to plan strategy and guide missiles.

Some simply want to stop China becoming too rich—as if impoverishing 1.4bn people were either moral or likely to ensure peace. Others, more wisely, focus on increasing America's economic resilience and maintaining its military edge. A reindustrialisation of the heartland, they argue, will rekindle support for market capitalism. In the meantime, as the global hegemon, America can weather other countries' complaints.

This thinking is misguided. If zero-sum policies were seen as a success, abandoning them would only become harder. In reality, even if they do remake American industry, their overall effect is more likely to cause harm by corroding global security, holding back growth and raising the cost of the green transition.

One problem is their extra economic costs. *The Economist* estimates that replicating the cumulative investments of firms in the global tech-hardware, green-energy and battery industries would cost $3.1trn-4.6trn (3.2-4.8% of global GDP). Reindustrialisation will raise prices, hurting the poor most. Duplicating green supply chains will make it costlier for America and the world to wean themselves off carbon. History suggests that vast amounts of public money could go to waste (see Free exchange).

Another problem is the fury of friends and potential allies. America's genius after the second world war was to realise that its interests lay in supporting openness in global commerce. As a result it pursued globalisation despite, by 1960, making up nearly 40% of global dollar GDP.

Today its share of output has fallen to 25% and America needs friends more than ever. Its ban on exports to China's chipmakers will work only if the Dutch firm ASML and Japan's Tokyo Electron also refuse to supply them with equipment. Battery supply chains will likewise be more secure if the democratic world operates as one bloc. Yet America's protectionism is irking allies in Europe and Asia (see Finance & economics section).

Integration and differentiation

America must also woo emerging powers. By 2050 India and Indonesia will be the world's third- and fourth-largest economies, projects Goldman Sachs, a bank. Both are democracies but not close friends of America. By 2075 Nigeria and Pakistan will have gained economic clout, too. If America demands that other countries freeze out China without offering sufficient access to its own markets then it will be spurned by rising powers.

A final worry is that the more economic conflict proliferates, the harder it becomes to solve problems that demand global collaboration. Despite racing to secure green technology, countries are squabbling over how to help the poor world decarbonise. It is proving hard to rescue countries in debt distress, such as Sri Lanka, because of obstruction by China, a big creditor. If countries cannot co-operate to tackle some problems, these will become impossible to fix and the world will suffer accordingly.

Nobody expects America to go back to the 1990s. It is right to seek to preserve its military pre-eminence and to avoid a dangerous dependence on China for crucial economic inputs. Yet this makes other forms of global integration all the more essential. It should seek the deepest co-operation between countries that is possible, given their respective values. Today this probably requires a number of overlapping forums and ad hoc deals. America should, for instance, join the Comprehensive and Progressive Agreement for Trans-Pacific Partnership, an Asian trade pact based on an earlier deal it helped write but then abandoned.

Saving globalisation may seem impossible, given the protectionist turn in American politics. But Congress's aid to Ukraine shows that voters are not insular. Surveys suggest the popularity of free trade is recovering. There are signs that the Biden administration is responding to allies' concerns about its subsidies.

Yet rescuing the global order will require bolder American leadership that once again rejects the false promise of zero-sum thinking. There is still time for that to happen before the system collapses completely, damaging countless livelihoods and imperilling the causes of liberal democracy and market capitalism. The task is enormous and urgent; it could hardly be more important. The clock is ticking. ■

Ukraine

Send in the tanks

The West is still too cautious about supplying weapons to reverse Vladimir Putin's invasion

Almost eleven months after Russia launched its unprovoked invasion of Ukraine, the war has turned static. Since the liberation of the southern city of Kherson two months ago, the battle lines have barely shifted. Fighting is largely restricted to bloody pounding along a short section of the front around Bakhmut, a city in the east of the country that the Russians have been trying to take since August at an appalling price. (On January 10th they claimed to have captured the nearby town of Soledar, but even this is disputed.) Unable to advance, Russia has resorted to blasting Ukraine's civilian infrastructure. Ukraine, however, is getting better at intercepting missiles and drones, and mitigating the damage using speedy repairs and a swarm of back-up generators.

But a frozen conflict suits the invader well enough, leaving Ukraine weak and vulnerable, its crippled economy dependent on foreign bail-outs while Russia malevolently squats along the vital coastline that provides sea access to the outside world. A frozen conflict allows Russia time to dig in, reinforce its lines and prepare for a fresh assault, or the permanent occupation of its new acquisitions. Ukraine therefore needs to keep pushing back, and to plan for the launch of its third big counter-offensive.

So it is good news that America, France and Germany are at last sending more powerful weapons—Bradley Fighting Vehicles, the similar French AMX and the German Marder. But that is not enough; these are armoured infantry carriers with guns, rather than true tanks, which have tougher armour and more powerful cannons. If Ukraine is to continue the work of ejecting Russia from the land that has been stolen, it will need more: heavy tanks and longer-range missiles.

Britain, reportedly, is close to approving the dispatch of around ten Challenger battle tanks. Ukraine's other allies should follow that lead; Poland is keen. American Abrams tanks and German Leopards—both much better than the Soviet-designed machines that Ukraine has already received from its eastern European allies—would give it a chance of punching a hole through the Russian-held land bridge that connects occupied Crimea to Russia, and of driving Russia back at least to the lines it held on the eve of war last February. Longer-range munitions for Ukraine's Western-supplied HIMARS rocket systems would put pressure on the invaders, who have pulled back their logistics hubs and command-and-control centres just beyond Ukraine's range.

This escalation of weaponry is contentious, as every such decision has been since the start of the war. Some voices in the West fear that Ukraine could seek to drag NATO into direct conflict by launching an attack on Russia itself—as opposed to Russian troops in the bits of Ukraine which the Kremlin pretends are Russian. Another worry is that, if Russia is pushed too far or too fast, its president, Vladimir Putin, could escalate and, in the worst case, even trigger a nuclear war.

These are not baseless fears. However, as Ukraine's financier and armourer, the West is in a position to insist that its weapons are not used to attack Russia. Moreover, Mr Putin has been threatening fire and brimstone since the start of the war. On its first day he said: "To anyone who would consider interfering from outside: if you do, you will face consequences greater than any you have faced in history." Despite these threats, sustained Western interference has met with no military consequences. Likewise the application of Sweden and Finland to join NATO, supposedly another Russian red line, until it wasn't.

You might argue that this is a vindication of Western gradualism. However, time is short. Spring is only a few weeks away (though, with the mercury down to -10°C in Kharkiv, it hardly feels that way today). If Ukraine cannot break the stalemate soon, it risks a repeat of 2014, when Russia and its proxies grabbed chunks of eastern Ukraine and, after intense fighting died down, the contact line between the two sides froze into something like a frontier. If so, although Mr Putin will have failed in his original aim to seize control of Ukraine, he may still prevent it from thriving as a prosperous, democratic, independent country—and that would count as a victory of sorts.

If Mr Putin concludes that his nuclear threats won him this victory, it would set a terrible precedent. For one thing, it would tell him that he should use more uranium-tipped coercion in his next misadventure. For another, every would-be aggressor would be encouraged to see nuclear weapons as a way to prevail when conventional arms fall short. Yielding to Mr Putin's nuclear threats today sets up more perilous stand-offs tomorrow.

The assessment that providing a Marder is much safer than sending in a Leopard is flawed. War is dangerous, but Ukraine needs to finish the job. It should be given the tools it needs. ■

Brazil

How to deal with an insurrection

Punish those who stormed Congress, but govern inclusively

Draped in Brazilian flags, they smashed offices, stole files, thumped police and injured at least five journalists. On January 8th thousands of supporters of Jair Bolsonaro stormed Brazil's Congress, Supreme Court and presidential palace, demanding the overturning of an election result. The parallels with the attack on America's Capitol by supporters of Donald Trump in 2021 are obvious—and far from coincidental. Mr Bolsonaro has long admired Mr Trump and copied his methods.

In Brasília as in Washington, a right-wing populist lost a fair vote but has never accepted the result. Mr Bolsonaro did not explicitly urge his supporters to storm the seat of government (if so, he may have been arrested). And he eventually denounced the violence. But he has spent months insisting that the only way he could lose the election in October last year was if the other side cheated—allegations he repeated on January 10th, seemingly wishing to whip up more trouble.

He claims that his opponent, Luiz Inácio Lula da Silva, was not merely a communist but also in league with the devil. (He is neither.) On spurious grounds, Mr Bolsonaro's party sued to have the ballot annulled, and he refused to attend Lula's inauguration on January 1st, when he was supposed to hand the presidential sash to his successor. Mr Bolsonaro has tried to convince his followers that he is the rightful president, and they are victims of a dastardly conspiracy. Many *bolsonaristas*, like many Trumpists, believe they have a duty to reverse a stolen election. Such is the power of a big lie told by a charismatic charlatan.

Yet delusion is no excuse for treason. Those who broke the law should be punished. Around 1,000 have been arrested (see Americas section). This is a good start, but three more things should be done to shore up Brazil's beleaguered democracy.

First, the government must restore order. That means not only prosecuting those who plotted and perpetrated the riot, but also making sure that police serve the law, not their favourite politician. Several officers were caught on camera chatting with rioters and taking selfies; others escorted protesters from their camp outside an army base, where they had been calling for a coup, to the government buildings. Mr Bolsonaro is popular among the main police forces, having defended their gold-plated pensions and tendency to shoot suspects. Lula should insist on police who, when on duty, are politically impartial.

Second, Brazil's opposition should condemn the violence. Several politicians who used to work for Mr Bolsonaro have done so unequivocally. But rank-and-file *bolsonaristas* remain devoted to their hero; in one poll 37% of Brazilians favoured a coup to remove Lula. In America senior Republicans initially condemned Mr Trump for inciting a lethal riot, but piped down when it became clear that he had not lost his hold over Republican voters. Their Brazilian peers should show more courage.

Third, Lula needs to govern his divided country inclusively. He should avoid inflammatory language. He was wrong to call the rioters "Nazis", for example. He ought to try harder to reassure those who did not vote for him that he will govern fairly for all. Prosecutors, meanwhile, should not overreach. The call to seize Mr Bolsonaro's assets before he has even been charged with a crime should be rejected.

The omens are not all bad. Lula has shown himself willing to compromise and to work with former *bolsonarista* lawmakers in Congress, filling a huge hole in the budget before he even took office. If he governs pragmatically, many who dislike him may at least come to accept his presidency. After the falsehood and fury of the Bolsonaro years, Brazil needs calm leadership. If Lula fails, Mr Bolsonaro, or someone like him, could win power again. ■

Work

The clue is in the name

America's trustbusters plan to curtail the use of non-compete clauses. Good

Three-quarters of Americans who work, do so for a firm. They have contracts setting out their pay, holiday, benefits and sometimes the appropriate way to dress (although not in journalism). A lot of contracts also say whether employees may work for a competitor if they leave the company. It is hard to know what share of American workers are restricted by these non-compete clauses, but the available evidence suggests it may be as high as one in five. More worrying, these clauses are as likely to apply to workers operating deep-fat fryers in fast-food kitchens as they are to workers operating in the conference rooms of white-shoe law firms. The Federal Trade Commission (FTC) has these clauses in its sights, on the grounds that they are anticompetitive and suppress wages.

Fans of non-compete clauses argue that scrapping them by decree will invite the state into the realm of private contracts, a symptom of regulatory excess. They have a point, but the FTC's case is stronger.

It is easy to see why firms like non-compete clauses, which are designed to suppress competition. It suits companies to be able to prevent a star employee from joining a rival, or starting out on their own and wooing clients. But there are also some arguments that non-competes could serve the public interest. Companies sometimes say that the clauses incentivise them to think about talent in a longer-term way. Why bother to spend time and money on training employees if they then join rival firms that go on to reap the benefit of the investment? Some

▸▸

companies also have legitimate worries about trade secrets walking off to a competitor when an employee leaves.

However, a non-compete clause is a heavy-handed way to achieve those ends. Intellectual-property law and non-disclosure agreements exist to preserve true trade secrets, and lots of firms find ways to keep valuable employees without shackling them to their jobs using non-compete clauses. The public interest also conflicts with the firm's interest: innovation and productivity spread when better ideas about how to do things become widely adopted. Hiring people with specific knowledge and experience can speed this process up, which is one reason why the engineers fired by tech giants like Meta and Twitter are sought after by firms in older industries eager to learn.

If the theory points in one direction, the evidence from how non-competes are used practically screams. In 2014 Jimmy John's, a chain of sandwich shops, was found to have inserted a two-year non-compete clause in its employees' contracts which barred them from seeking employment with any rival business that made money by "selling submarine, hero-type, deli-style, pita and/or wrapped or rolled sandwiches" within a three-mile radius of where they currently worked. After this egregious example came to light, the company ended the practice. But franchises often stop employees from going to work at other outlets of the same franchise, reducing their bargaining power.

It strains credulity to argue that these workers are the guardians of trade secrets. Instead, the evidence is that firms use non-compete clauses to drive down wages by lowering the value of workers in the job market. About half of people with non-compete clauses in their contracts work in states where they cannot legally be enforced. They may get away with it because employees do not know their rights, especially those in the low-paid part of the labour market.

The evidence that non-compete clauses really make companies more innovative and higher-skilled is scarcely more convincing. Washington state, home to Amazon and Microsoft, takes a middle path by restricting non-compete clauses to the contracts of high-earners. California, the global HQ of disruptive innovation, goes a step further and bans non-competes altogether. The FTC should do the same, on the grounds that they are anticompetitive. ■

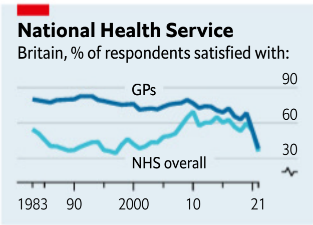
General practitioners

The doctor won't see you now

Fixing the problems of the NHS means fixing the problems of GPs

BRITONS USED to see the National Health Service (NHS) as a source of pride. It is now a source of danger. Data suggest that, in the course of December, over 50,000 sick people in England waited more than 12 hours to be admitted to hospital from accident-and-emergency (A&E) departments. *The Economist*'s mortality model echoes the warnings from emergency doctors: around one in four excess deaths in recent months is attributable to delays in emergency care (see Britain section).

The scenes in A&E are just the most alarming symptoms of a health-care system that is failing. Downstream, one in seven patients is ready to leave the wards, which would free up beds for those clamouring to get in, but they would have no one to look after them if they were released from hospital. The government's proposed solution—an extra £200m ($243m) to block-book places in private care homes—seems sensible. But it will take more than that to deal with the deeper problem: a chronic shortage of staff.



Upstream, the same issue bedevils general practice, the network of family doctors where many of the pressures on the NHS first build. General practitioners (GPs) are conventionally a patient's first and most frequent point of contact with Britain's health-care professionals. But the system is buckling. Demand is rising—owing partly to a backlog in cases from the pandemic and partly to an increase in patients with complex, chronic diseases. And the number of doctors is dwindling, as GPs retire early, emigrate or reduce their hours. There are 15% more junior doctors in hospitals than there were in 2019, but 2% fewer full-time family doctors (albeit more practice staff). As a result, millions are not getting the care they need. Many turn directly to the hospitals. Polling shows that one in five people who cannot see their family doctor goes to A&E instead. Many simply get sicker.

To slow the stampede of older GPs retiring early, the government should exempt doctors from pension-tax rules that penalise high-earners. More advanced technology, including automated telephone services and online consultations, would calm the 8am panic to book an appointment.

More profound changes are needed to make this foundation of the NHS sturdy again. General practices are businesses, most commonly owned by GP partners. The building will collapse if partners continue to quit. One option is to make all GPs salaried NHS employees, as consultants are in hospitals. The Labour Party is considering this approach, along with other reforms such as allowing self-referrals to certain specialists.

Buying out GP partners and their premises would be costly. It would also be risky to jettison a model that, for all its faults, remains the envy of other countries. Primary care provides most of the NHS's patient contacts for just 9% of its budget. Specialists, meanwhile, have seen their hospital waiting lists spiral to over 7m: self-referrals would make the problem worse.

It would be better to make changes from within. The NHS should abolish the Quality and Outcomes Framework, a pointless pay-for-performance scheme which means that GPs spend hours filling out forms instead of seeing patients. Pharmacies and other parts of the primary-care system should be encouraged to do more. Practices specialising in chronic illnesses should receive higher fixed fees per patient, enabling continuity of care for those who most need it. Reweighting funding to benefit clinics in the poorest areas would reduce health disparities: they care for 10% more patients than practices in the richest areas, but receive 7% less cash.

The NHS's most urgent problem lies in its hospitals. But the health service will not be fixed unless general practice is, too. ■

IISS

Director-General & Chief Executive

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HONG KONG: Back on the World Stage

With the return of major international events and revival of economic activity in the wake of the COVID-19 pandemic, Hong Kong is back on the world stage showcasing the city's advantages as a global business and financial centre, as well as an arts and cultural hub that's connected, dynamic and sustainable, and ready to scale new heights.

World of finance

- World No.4 Global Financial Centre (Global Financial Centres Index - September 2022)
- World's leading fundraising hub for biotechnology (52 pre-revenue or pre-profit biotechnology companies, raised around US$14.7 billion (HK$115 billion) at end-September 2022)
- World's largest offshore Renminbi (RMB) business hub; about 75% of the global offshore RMB payments are processed via Hong Kong
- Hong Kong - Mainland mutual market access programmes are deepened and expanded in a gradual manner, which include Stock Connect, Bond Connect and Wealth Management Connect
- The Government Green Bond Programme has seen green bonds totalling close to US$10 billion equivalent issued up to end-August 2022. Inaugural retail green bond of HK$20 billion (US$2.6 billion) issued in May 2022

World of innovation and technology

- Over US$19.2 billion (HK$150 billion) government expenditure on I&T development since 2017
- Developing Hong Kong-Shenzhen Innovation and Technology Park; first batch of 8 buildings to be completed in phases starting from end-2024
- Collaborating with Shenzhen to take forward the Shenzhen-Hong Kong Innovation & Technology Co-operation Zone
- InnoHK Research Clusters in the Hong Kong Science Park pool together over 30 world-renowned non-local universities and research institutes to collaborate with local universities in setting up 28 research laboratories to foster global research collaboration
- Advanced Manufacturing Centre in the Tseung Kwan O InnoPark opened in 2022

Over US$19.2 billion
expenditure since 2017

Connecting the world

International aviation hub

Massive expansion of Hong Kong International Airport: a third runway officially opened in November 2022 while a new Three-runway System, set to open in 2024, will significantly increase handling capacity to 120 million passengers and 10 million tonnes of air cargo annually.

Asia's arts and cultural hub

The M+ museum and Hong Kong Palace Museum, opened in 2021 and 2022 respectively, are flagship venues at the West Kowloon Cultural District, an arts and cultural landmark for the city on a site covering 40 hectares overlooking Victoria Harbour.

Guangdong-Hong Kong-Macao Greater Bay Area (GBA)

An emerging engine for growth, the GBA covers nine major municipalities in Guangdong plus the Special Administrative Regions of Hong Kong and Macao. It has a combined population of over 86 million people, larger than that of most European countries, and GDP of about US$1.96 trillion in 2021, roughly equivalent to that of Canada.

GDP
about US$1.96 trillion in 2021

Legal and dispute resolution services

Hong Kong ranks the third most preferred seat for arbitration globally according to the 2021 International Arbitration Survey conducted by Queen Mary University of London.

Low tax regime

A business-friendly city with a low and simple tax system with standard salaries tax of 15% and profits tax capped at 16.5%. No VAT, GST or capital gains tax and only income derived in Hong Kong is taxed in Hong Kong.

World-class talent

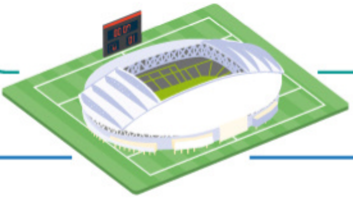
- 5 universities in World Top 100 (Quacquarelli Symonds (QS) World University Rankings 2023)
- The Global STEM Professorship Scheme to attract more world-renowned scholars to engage in I&T-related teaching and research in Hong Kong
- A new Top Talent Pass Scheme will entice talented professionals from around the world to pursue their careers in Hong Kong
- The Technology Talent Admission Scheme aims to fast-track arrangement for admitting technology talent to work on R&D in Hong Kong
- The Quality Migrant Admission Scheme facilitates world-class talents to relocate to Hong Kong
- The Belt and Road Scholarship aims to attract outstanding students from Belt and Road countries to pursue full-time publicly-funded university studies in Hong Kong

5 UNIVERSITIES
World Top 100

World stage for arts, culture, sport

- Hong Kong to become an East-meets-West Centre for International Cultural Exchange under the National 14th Five-Year Plan
- A new Mega Arts and Cultural Events Fund set up to support international arts and cultural events
- Hong Kong's pop culture will be further promoted globally through film, TV and streaming platforms
- Kai Tak Sports Park - Hong Kong's new state-of-the-art multipurpose sports complex is targeted for completion from the second half of 2024
- In 2020, Hong Kong ranked as the second-largest art market in the world, after only New York (ArtTactic)

ART MARKET
second-largest in the world



World No.1 city

- World No.1 for economic freedom (Fraser Institute: Economic Freedom of the World: 2022 Annual Report)
- World No.1 air cargo hub in 2021 (Airports Council International: Air Cargo Traffic)
- World No.1 EMBA programme: Financial Times EMBA Ranking 2022: Kellogg-The Hong Kong University of Science and Technology EMBA programme
- World No.1 for Business Legislation and No.5 globally in the World Competitiveness Yearbook 2022 (International Institute for Management Development)
- World No.1 public transit system (Oliver Wyman Forum in partnership with University of California, Berkeley: 2022 Urban Mobility Readiness Index)
- World No.1 transport system in the "sustainable development index" research report published by the internationally-renowned consultancy firm McKinsey in 2021

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Letters

Opportunities for Italy

Your special report on Italy (December 10th) gave an accurate picture of the problems the country faces, particularly the "missed opportunity" for reform on joining the euro and that the debt problem is fundamentally a GDP growth problem. Many of the ambitious reforms you advocated are part of the national recovery and resilience plan (PNRR) that was initiated by the administration of Mario Draghi.

But the overall picture you painted may be a touch pessimistic. Taking a step back, Italy has been a net loser in the wave of globalisation that was triggered in the early 1990s. As globalisation goes into reverse, Italy could benefit. The country has produced few truly multinational corporations. Whereas Germany and France supported their global industrial champions, Italy's protectionist instincts were propping up lost causes, such as Alitalia, an airline, and Monte dei Paschi, a bank. An analysis of the degree of internationalisation of the "blue chip" companies listed on the Milan stock exchange does not compare favourably with the French and German equivalents. The limited number of global champions and low foreign investment into Italy are a significant driver of relatively poor levels of research and development, salaries and economic growth.

However, the macro picture is turning to Italy's advantage and may provide a tail wind in the next decade. The likelihood of creating global champions is low. But the country can compete credibly in attracting foreign investment from the wave of reshoring we are seeing in the euro zone. Inflationary pressures compare favourably with other euro-zone economies given that Italy is far from full employment, particularly among young graduates. And the PNRR is catalysing a step-change in the level and diversity of venture capital and startup activity linked to centres of research excellence. Thus far, foreign investors seem to be responding.

DAVIDE TALIENTE
Former adviser to the Draghi administration
London/Rome

In the introductory article of your special report we read that the Italian public administration "remains too large". Quite the opposite. In Italy there are some 3,200,000 employees in the public sector, compared with around 5,750,000 in Britain and 5,600,000 in France. The population of both countries is less than 12% larger. The production of the Italian public sector is quite poor, for lack of personnel; the productivity is arguably quite high.

GUIDO ORTONA
Università del Piemonte Orientale
Alessandria, Italy

James Callaghan's religion

Bagehot was mistaken when he claimed that Sir Keir Starmer would be the first avowedly atheist prime minister of Britain since Jim Callaghan (December 24th). My father, Jim Callaghan, was brought up as a practising Baptist and as a young man was a Sunday school teacher. As a young man embracing socialism he had difficulties reconciling his new beliefs with the teachings of his church, but he was persuaded to stay in his Baptist chapel. He explains in his autobiography that from then on the Labour Party had the first charge on his energies. He went on to write "I never forget the immense debt I owe to a Christian upbringing, nor have I ever escaped its influence." Incidentally, the title of his autobiography is "Time and Chance", a quote from Ecclesiastes 9: 11.

MICHAEL CALLAGHAN
Colchester, Essex

Mental-health problems

Regarding forced treatment for the mentally ill in America, the Donaldson standard, which flows from the Supreme Court's decision in *O'Connor v Donaldson*, has been applied in almost all the states since the ruling in 1975. Broadening this legal test for involuntary care beyond whether a person is a danger to self or others might make it easier to provide short-term treatment for the acute phase of chronic mental illness, but it does not solve the problem of a lack of services for the homeless mentally ill ("Care or confinement", December 24th).

The United States might have followed the example of Italy, which, after the abrupt closure of its often ghastly hospitals in 1978, has created 30,000 places in open, community-based residential facilities with between ten and 20 beds. The cost per bed is about the same as the estimated cost of sanitation alone generated by a person sleeping in the open in a large American city. With the right combination of supported accommodation and persistent care, the long-term involuntary treatment of people with chronic forms of mental illness is rarely necessary.

OLAV NIELSSEN
Professor of psychiatry
Macquarie University
Sydney

Linking results to pay

"Lessons in poverty" (December 10th) drew well-deserved attention to efforts of the government in Sierra Leone to increase public spending on primary-school students. But this fourfold rise in spending over four years is hardly a bet on schools. Even with the overdue increase, it will take years to overcome a legacy of low spending to improve education in Sierra Leone.

The bulk of your article pins its hopes on a fashionable aid project that will make more resources available if certain results are achieved. The approach assumes that low education quality is not down to lack of funding but, rather, the result of government (agent) moral hazard. Should *The Economist* not turn the argument on its head? Should aid projects not make the salary payments of development-agency staff (principal) conditional on the success of the projects they designed?

MANOS ANTONINIS
Director
Global Education
Monitoring Report
Paris

Inflationary pressures

I see that the newsstand cover price of a printed edition of *The Economist* in Britain has increased from £6.99 to £7.99 over the new year, a rise of 14.3%. This is clearly inappropriate at a time of fiscal and monetary prudence. A price rise of this measure will fuel inflation further as readers seek higher wages to compensate and other publications make similar price increases. We must all make sacrifices as, after all, we are all in it together (or perhaps not).

As such the Independent Price Review Body here (that's me and the missus) has decided to make an extremely generous offer of an acceptable 4% increase, over three years, in the price of *The Economist*. However, we expect this rise to be accompanied by increased productivity and an end to outdated working practices at your newspaper. Your correspondents will have to cover at least two continents and double the number of words they write. Furthermore the editorial staff will have to display more rigorous analysis of current events so that we do not have to read such nonsense as "The beginning of the end of Putin" (March 3rd 2012) and predictions of oil at $5 a barrel ("Drowning in oil", March 6th 1999).

Many of these changes could be accomplished by publishing more letters from readers.

STEPHEN LACEY
Chelmsford, Essex

Letters are welcome and should be addressed to the Editor at
The Economist, The Adelphi Building,
1-11 John Adam Street, London WC2N 6HT
Email: letters@economist.com
More letters are available at:
Economist.com/letters

Efficiency be damned

Subsidies, export controls and curbs on foreign investment are proliferating around the world

TRADE MINISTERS are not known for histrionics. Yet South Korea's, Ahn Duk-geun, is alarmed. The world is on the verge of opening Pandora's box, he warned last month. If the European Union follows through on threats to mimic America's protectionist industrial policies, "Japan, Korea, China, every country will engage in this very difficult race to ignore global trading rules." The international system of trade and investment, painstakingly negotiated over decades, will be upended.

William Reinsch, who used to oversee America's export controls as an undersecretary of commerce, is just as blunt. America has always wanted to maintain a technological edge over other economic powers, he says. These days, however, it is pursuing that goal in a new way: "We have moved from a 'run faster' to a 'run faster and trip the other guy' policy." The great powers are coming to see economic advances, at least in the broad swathe of industry they define as strategic, in zero-sum terms. The implications for global prosperity are bleak.

In a speech in September America's national security adviser, Jake Sullivan, spelled out the basic tenets of this beggar-thy-neighbour approach. Merely retaining a technological lead over China and other rivals was no longer enough, he argued. Instead, he said, America had to pursue "as large of a lead as possible" in chipmaking, quantum computing, artificial intelligence, biotechnology and clean energy. To that end, America needed not only to welcome clever people and foster innovation, but also to impede technological advances in countries like China and Russia.

Mr Sullivan described two main ways to ensure American supremacy: using subsidies and other forms of industrial policy to shift supply chains away from geopolitical rivals, and stricter investment screening and export controls to keep advanced technology out of unfriendly hands. As America, once the world's loudest advocate of free trade and open economies, adopts and reinforces such policies, other countries are mimicking its approach. The result is a proliferation of obstacles to international trade and investment at a time when both were already stagnating.

The sudden enthusiasm for industrial policy in America and elsewhere epitomises the trend. In 2022 Congress passed two lavish bills aiming to bolster domestic industry, in the name of national security, job creation and decarbonisation. The CHIPS Act, which provides $52bn of incentives for the semiconductor industry, attempts to reverse a multi-decade decline in America's share of chip manufacturing. The Inflation Reduction Act (IRA) will spend nearly $400bn to boost clean energy and reduce dependence on China in important supply chains, such as for batteries for electric vehicles (EVs).

Handouts be praised

It is not just America which is trying to boost domestic industry at the expense of foreign rivals. According to the UN, more than 100 countries accounting for over 90% of the world's GDP have adopted formal industrial strategies. Spending on subsidies among G7 countries has risen sharply in recent years, from 0.6% of GDP on average in 2016 to 2% in 2020. In part, this is a response to the pandemic: the European Union, for example, adopted a gargantuan ▸▸

recovery package, involving more than $850bn in spending, including many handouts for business. But although spending on subsidies has fallen from its peak in 2020, it remains well above its pre-covid levels.

Multinationals having second thoughts about manufacturing in China are in some cases being paid to relocate. Japan included incentives for such relocations in its budget in 2020. India is trying to lure footloose firms in 14 different industries by offering up to $26bn of production-linked incentives over five years. Such overtures may become common if commerce begins to fragment and firms are required to choose a side.

Another reason for the ballooning handouts is tit-for-tat subsidies, which aim to counteract the incentives offered in other countries. The $52bn payout to chipmakers under America's CHIPS Act sounds lavish, but it is only a small part of the $371bn earmarked for the semiconductor industry over the next decade in the seven most generous countries, according to UBS, a bank. (China, the EU, India, Japan, South Korea and Taiwan are the other big spenders.) This week Taiwan approved new tax breaks for its chipmakers.

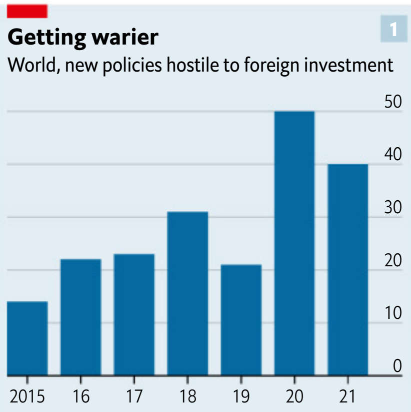
EV batteries, of which China produces 70%, are another magnet for subsidies and other forms of state support. Since 2020 Indonesia has banned the export of nickel to encourage battery manufacturing at home. Australia and Canada are shelling out billions of dollars to boost mining and processing of ores. A controversial element of the IRA is a $7,500 tax credit for American consumers purchasing EVs. One half of the credit is available if a vehicle's battery components are manufactured or assembled in America; the other half is based on the origin of the battery's minerals. Final assembly of the vehicle must take place in America, too.

Foreign EVs that do not meet either of these thresholds will be hugely disadvantaged. Consider Hyundai, a South Korean carmaker which sells more EVs in America than any other firm bar Tesla. Its vehicles are not eligible for the credit since they are currently assembled abroad. It is building a $5.5bn EV plant in America, but it will not start production until 2025. Even then, it is not clear if Hyundai's cars will qualify for the mineral-related component of the credit, since the American authorities have not yet published detailed regulations about acceptable sources.

Other governments are likely to respond to America's coddling of domestic producers with more tit-for-tat subsidies (see Finance section). In December the finance ministers of both France and Germany, as well as Ursula von der Leyen, the president of the European Commission, called for a European version of the IRA. Margrethe Vestager, the EU's competition tsar, who polices subsidies within the bloc, appears open to the idea of prolonging a pandemic-induced loosening of the rules to allow member-states to counter the competitive challenge posed by the IRA.

Getting warier

World, new policies hostile to foreign investment



Source: United Nations

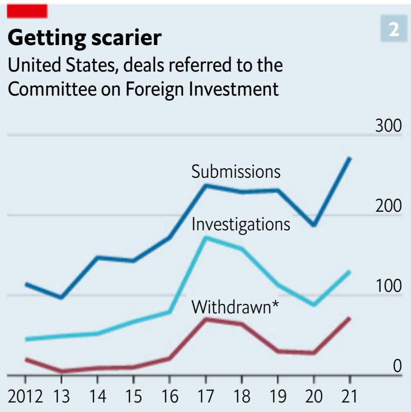
The potential scale of spending is staggering. If seven other market-oriented economies (Australia, Britain, Canada, the EU, Japan, India and South Korea) adopt subsidies as large as America's—about 2% of GDP—the total bill in the eight countries would be $1.1trn. In the industries that are receiving the most handouts the effect is even more pronounced: subsidies for semiconductors amount to more than 60% of the industry's annual sales. Western taxpayers are spending lavishly to make an all-important part of the world economy far less efficient.

Investors beware

Investment screening is another policy that Mr Sullivan champions as a means to preserve America's technological edge. Selling to the highest bidder is not as straightforward as it used to be, especially if that bidder is Chinese. UNCTAD, a UN agency which tracks investment policies around the world, counted a record number of new measures restricting foreign investment in 2020 (see chart 1). UNCTAD calculates that 63% of global investment flows were subject to a screening regime last year, up from 52% in 2020.

Getting scarier

United States, deals referred to the Committee on Foreign Investment



Source: Government statistics *After investigation starts

The Committee on Foreign Investment in the United States (CFIUS), a body charged with identifying and blocking deals that might threaten national security, is the model for many of these new regimes. In 2018 new legislation broadened CFIUS's jurisdiction over transactions involving "critical" technology and infrastructure and sensitive personal data. An order issued by Mr Biden in September directs the committee to focus its attention on the security of supply chains and technological leadership.

The committee has been busy—between 2017 and 2021 CFIUS investigated 661 transactions, more than twice as many as during the previous five years. Although it blocks relatively few investments outright, many deals are called off under the glare of its scrutiny, before a final decision is reached (see chart 2). ByteDance, the Chinese parent of TikTok, a video app, remains locked in negotiations with it more than two years after Donald Trump issued an order, later revoked, demanding the divestment of TikTok's American business.

The EU called on member states to set up or strengthen screening mechanisms in 2020. Nearly all of them now have one. In 2021 alone three members introduced new regimes and six tightened existing laws. Many are learning on the job. Last year was exceptionally busy for Germany's watchdog, which intervened in the acquisition of Heyer Medical, a medical-technology firm, and a facility owned by Elmos, an automotive chipmaker. Long-awaited guidelines on France's regime issued in September did little to limit the extraordinary discretion afforded regulators to review transactions. Britain's screening regime began examining deals a year ago and has already blocked or unwound four (three of which involve a Chinese buyer of a semiconductor firm or technology).

More restrictions will surely follow. In December Canada announced legislation to strengthen its investment-review process weeks after ordering three Chinese investors to divest from its lithium miners. A new regime to screen foreign investment in the Netherlands is expected to come into force this year.

Although the number of deals blocked by investment-screening regimes is relatively low, their scope—and thus the effect they have on corporate decision-making—is vast. The regulations tend to apply only to "strategic" industries, but these are typically defined very broadly. Industries accounting for 60% of the value of America's stockmarkets fall under the potential remit of CFIUS, judging by the deals submitted to it in 2021. The 17 industries covered by the British regime account for 35% of the big firms listed in Britain, we calculate. In 2021, 29% of foreign investments referred for screening in Europe underwent detailed scrutiny.

Mr Sullivan would like to go further. "We are making progress," he said in his speech, "in formulating an approach to address outbound investments in sensitive technologies." There is a broad consensus in Washington that American capital must not be allowed to "enhance the technological capabilities of our competitors", as he put it (since 2000, for instance, American venture capitalists have invested more than $50bn in China). Some restrictions already exist: the CHIPS Act bars firms that receive its subsidies from making big investments that could benefit China's semiconductor industry, for instance. A comprehensive regime, however, might lead to big changes in the allocation of America's $171bn a year in foreign direct investment in new projects. The European Commission has said that it, too, will consider screening outbound investments in 2023.

Export controls, which restrict the transfer of goods and services to certain countries, companies and people, are a third policy acclaimed by Mr Sullivan. Western governments have used them extensively against Russia since its invasion of Ukraine, curbing its access to all manner of goods, from chips to chemicals. The intention is not just to impede Russia's war machine, but also to disrupt critical industries, such as oil refining. Mr Sullivan boasts that the controls have forced Russia to use chips from dishwashers in its military equipment.

America has long maintained a list of companies which must apply for permission to purchase goods with potential military uses. The number of Chinese firms on this "entity list" increased from 130 in 2018 to 532 in 2022. China accounts for more than a quarter of the firms on the list, the Carnegie Endowment for International Peace calculated last year. Another 36 names, including Yangtze Memory Technologies, a memory chip producer previously in talks to supply Apple, were added to the list in December.

Another American regulation, the foreign direct product rule, tries to restrict sales of items based on American technology, even if they are designed and manufactured abroad, by imposing penalties on the firms involved. This far-reaching instrument was successful in undermining the manufacture of smartphones by Huawei, a Chinese telecoms firm.

In October America's Department of Commerce announced export controls on advanced chips used to power supercomputers and artificial-intelligence algorithms. The new rules in effect ban the sale of the most powerful chips, and the software and manufacturing equipment needed to produce them, to Chinese firms. Similar restrictions in other high-tech fields are expected this year.

The restrictions announced in October apply the foreign direct product rule on an unprecedented scale. No distinction is made between private Chinese firms and state-owned enterprises. Since advanced chipmaking requires continuous technological support in the form of software updates, replacement parts and engineering advice, which are also covered by the rules, "in the short term, the restrictions could reverse the capabilities of China in leading-edge chips", says Gregory Allen, a researcher at the Centre for Strategic and International Studies, a think-tank. Barclays, a bank, reckons that the controls could reduce China's annual GDP growth by 0.6 percentage points.

The restrictions are so severe America may struggle to persuade its allies to adopt equivalent measures. Yet without such unity, they will not work. Other countries with advanced semiconductor industries—in particular the Netherlands and Japan—could undermine their effectiveness by providing China with substitutes. American policymakers will find a worrying precedent in the satellite industry. After America introduced broad export controls against China in 1999, firms in Europe began designing satellites free from American parts to evade the new strictures. American firms lost revenue, but China did not lose access to cutting-edge satellites.

Foreign chipmakers are loth to forgo sales to China, the world's largest market for semiconductors. America is pressing Japan and the Netherlands to follow its lead, without any clear result. Big semiconductor firms are grumbling: the boss of TSMC, the world's largest contract chipmaker, points out that the controls will reduce the industry's productivity and make it less efficient.

The same is true of all the new impediments to international trade and investment. As the logic of efficiency and comparative advantage gives way to a focus on security and economic nationalism, investments will be duplicated and costs will rise. The result will be higher bills for taxpayers and consumers and therefore diminished prosperity.

Foreign direct investment has already fallen from a peak of 5.3% of global GDP in 2007 to 2.3% in 2021. The deals that continue to go ahead are more heavily regulated. In 2022 a Chinese buyer was permitted to acquire only 25% of a port in Hamburg, rather than the planned 35%. In 2021 half of all approvals of cross-border investment in France came with conditions attached.

Meanwhile, subsidies programmes are altering capital spending. In the semiconductor industry, famed for its boom-and-bust cycles, the risk of oversupply is substantial. More than 40 new semiconductor projects have been announced across America since mid-2020, according to the Semiconductor Industry Association, including fabrication plants in Arizona to be built by Intel and TSMC at an estimated cost of $60bn. Firms in the EV supply chain are enjoying a similar binge. According to a report by Goldman Sachs, around $164bn in spending is needed this decade by American and European firms to localise the supply chain for batteries.

Consumers be warned

Viewed in isolation these plans increase investment in national economies; at the global level they represent an enormous increase in costs. By our calculation, duplicating the world's existing stock of investments in semiconductors, clean energy and batteries would cost between 3.2% and 4.8% of global GDP. And the logic of the zero-sum world means further escalation in government intervention is likely: after all, if no country's firms can be assured of equal treatment and open market access when operating abroad, it makes more sense for all countries to nurture and protect industries at home.

Countries like China and Russia do present a profound threat to the current global order. Russia's curbing of gas exports to Europe in response to European support for Ukraine highlights the risks of relying on such places for crucial imports. The urge among Western democracies to hobble adversaries economically to diminish such dangers is understandable. But it will have huge costs. What is more, the economic policies being adopted in the name of national security and competitiveness are so sweeping and clumsy that they are hurting allies as much as enemies. The zero-sum mindset may or may not succeed in making the world safer for democracy. But it will certainly make the world poorer. ■

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The National Health Service

Dr no go

MOUNTAIN ASH

General practitioners are a big part of the crisis in Britain's health-care system

Sajad Ahmad seems to have a nice life. He makes good money working as a part-time general practitioner (GP), a family doctor, in the small town of Mountain Ash in southern Wales. From a fancy Scandinavian-style building, his consulting room looks out over hills of burnished copper crowned with firs.

But he cannot escape the immense strains currently affecting the National Health Service (NHS). One afternoon in December he had 42 appointments (the British Medical Association, the doctors' union, advises a safe workload for GPs should not exceed 25 patients per day). "I had a horrible day," recalls Dr Ahmad. "I broke down; I was probably horrible to the staff."

General practice is one part of a health-care system in turmoil. The most visible and alarming symptoms of crisis are overwhelmed accident-and-emergency (A&E) departments in hospitals (see next article). Record delays getting into A&E partly reflect pressures in the social-care sector. But they can also be traced to GPs, the gatekeepers to the NHS and conventionally the first port of call when a person feels sick. Primary-care services, which include general practice, pharmacy, dentistry and optometry, provide the vast majority of clinical contact in the NHS for less than a tenth of its budget. If things go wrong here, the knock-on effects are huge.

Things are going very wrong indeed. In November 2022 over 5.3m people waited more than two weeks to see their GP; many more were unable to get an appointment altogether. That puts pressure on other services. Some rebuffed patients call an ambulance; according to a recent poll, around one in five adults have gone to A&E because they cannot see their GP. Those who stay at home may find that their condition becomes harder to treat; for a few, treatment comes too late. Problems also flow the other way, back to GPs. Hospital waiting lists have ballooned from 4.2m to 7.2m since the pandemic began. Unable to get their hip replacement or dermatology appointment, many desperate patients are returning to their family doctor.

The jams are fuelling growing frustration. In the year to April 2022 almost 100,000 written complaints were made about GPs, an increase of more than a third compared with the same period three years before. Satisfaction with GPs, as measured by the British Social Attitudes Survey, plummeted from 68% to 38% between 2019 and 2021, a more dramatic drop than for any other NHS service (see chart 1 on next page). There are several sticks with which to beat GPs, from availability to pay to hours. Some of the criticism is warranted; much of it is unfair.

Many patients cannot forgive GPs for shutting their doors at the start of the covid-19 pandemic (albeit initially on the advice of the government). After switching to telephone and virtual appointments, some doctors have been slow to resume face-to-face consultations, although seven in ten appointments are now in person. But general practice stands out for providing more services than it did before the pandemic (see chart 2 on following page).

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28 Bagehot: The past on trial

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Some dissatisfaction with GPs reflects the fact that they are well-paid. Unlike hospitals, general practices are small-to-medium-sized businesses, which are independently contracted by the NHS. Most are owned by GP partners, who work together to secure premises, run their business and pay their staff, including salaried GPs. The bulk of their income comes from delivering the essential services agreed in their contract. For this, they are paid a fixed sum for each patient on their books. Other parts of the contract buttress their earnings.

Partnership can be a very lucrative arrangement. In 2020-21 the income of the average GP partner in England increased to £142,000 ($172,000), although partners are self-employed and do not benefit from employer pensions and the like. But its allure seems to be fading. Many GPs are choosing to become salaried, which means they earn less than half as much as partners but forgo the commitment of running a demanding business. Some partners are handing back their contracts. An investigation by Pulse, a website for GPs, found that in the nine years to August 2022, 474 surgeries across Britain had closed without being replaced.

A shortage of doctors is by far the biggest challenge facing general practice. Whereas there are 9% more full-time-equivalent consultants and 15% more junior doctors in hospitals than there were in 2019, there are 2% fewer family doctors. Analysis by the Health Foundation, a think-tank, found that England was missing the equivalent of 4,200 full-time GPs in 2022, a number projected to double by 2030. Some are retiring early or moving abroad. The rest are reducing their hours.

Covid-19 is not sufficient to explain this shortfall. Recruitment and retention have been problems for the past decade, says Azeem Majeed, a professor at Imperial College London, and a part-time GP. In fact, the profession was haemorrhaging doctors at a faster rate before the pandemic. A deeper crisis plagues the modern GP—their job is less satisfying than it was before.

The births and deaths they once presided over are now largely the domain of specialists. The sickness they deal with has become more complex and more chronic. Fifty years ago "most people were dead at 70," notes Beccy Baird of the King's Fund, another think-tank. Now there are around 15m Britons with long-term conditions such as diabetes and dementia. Practices carry out double the number of consultations with frequent attenders (those who visit clinics more often than 90% of other patients) that they did 20 years ago. Such patients, who are likely to be older and have multiple conditions, take up around four in ten of a clinic's appointments.

Bureaucracy has increased, although GPs often conveniently forget that this is a commitment they once happily signed up for. As part of the GP contract introduced in 2004, practices exchanged a much-maligned responsibility to provide round-the-clock care for a pay-for-performance scheme to supplement their main income. The Quality and Outcomes Framework in-

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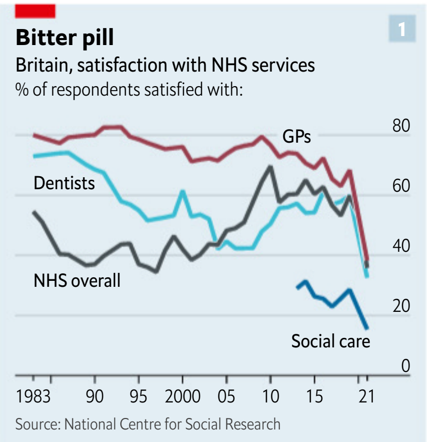


Bitter pill

Britain, satisfaction with NHS services

% of respondents satisfied with:

Source: National Centre for Social Research

The NHS in crisis

Deaths of delay

How many excess deaths are associated with A&E delays?

THE FACT that the National Health Service (NHS) is under enormous pressure is undisputed. Almost everything else is debated, including the question of how many patients are dying as a result of the chaos in hospitals. The proportion of patients who wait more than 12 hours in accident-and-emergency (A&E) departments to be admitted to a ward has risen from 2% to 7% over the past year. The Royal College of Emergency Medicine (RCEM), a doctors' association, has estimated that delays in A&E are leading to 300-500 additional deaths per week. Officials at NHS England do not accept this figure.

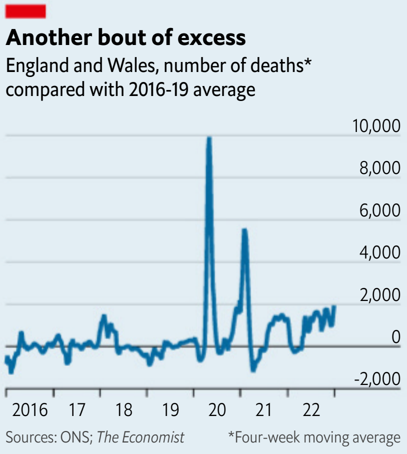
A glance at the data suggests that something is awry. Excess mortality in England and Wales—a measure of deaths from all causes compared with a baseline period—in the four weeks to December 30th was 17% higher than the average of this period in 2016-19. That is an extra 1,700 deaths per week (see chart).

The primary basis for the RCEM's claim is a paper published in the *Emergency Medicine Journal* in early 2022. Its authors used NHS data from 2016 to 2018 to estimate an individual's risk of death after arriving in A&E. They found that a wait of six to eight hours, rather than the target of less than four hours, for a patient to be transferred from A&E to a ward increased their risk of death by 1.7 percentage points, other things being equal.

The RCEM admits that its own estimates are rough. To verify them, *The Economist* has built a model using hospital-level data on patient deaths and A&E waiting times for 121 individual NHS trusts in England on a rolling 12-monthly basis between March 2016 and July 2022. We, too, find that delays in A&E—from time spent waiting for initial treatment to the decision to admit—are associated with higher mortality after controlling for other things. A ten-percentage-point increase in the proportion of A&E patients waiting between four and 12 hours for admission to a ward, for example, is associated with an additional 1.2 deaths per 1,000 patients arriving at hospital.

NHS death data since July 2022 are not yet published, but data on waiting times are available up to November. Our model suggests that an additional 3,400 A&E-associated deaths occurred between August and November 2022 compared with a scenario in which waiting times remained at 2019 levels. At around 260 per week, that number is below the ballpark figure from the RCEM, but would still account for one-quarter of the excess deaths in England over that period.

There are caveats. The model uses hospital-level mortality data, not data for emergency admissions specifically. Other factors could be having an effect, from ambulance waiting times to problems seeing GPs: our estimate is not a ceiling on the number of excess deaths that can be associated with the NHS. The prevalence of covid-19 and flu is beyond its control. But that more people are dying—and dying in large numbers—because of delays in A&E is clear enough.



Another bout of excess

England and Wales, number of deaths* compared with 2016-19 average

Sources: ONS; *The Economist* *Four-week moving average centivises GPs to earn points, and thus more money, for chasing 72 targets. Most of these are related to chronic-disease management: maintaining a list of patients with heart disease, for example, or tracking whether they are taking aspirin.

That deal, which within three years had earned GP partners a pay bump of 58%, now looks like a Faustian bargain. Doctors have traded time with patients for paperwork. Although only one in four GPs now works full-time, practitioners still clock in an average of 38.4 hours per week, according to the GP work-life survey by the National Institute for Health and Care Research. That is more than the typical full-time employee in Britain. Time spent box-ticking means that patients are less likely to receive continuity of care (ie, seeing the same doctor consistently) and more easily "reduced to a statistic", sighs James Le Fanu, an ex-GP-turned-commentator.

GP partners also have more people to manage. In November 2022 over half of all appointments at surgeries were with non-GP staff such as nurses, pharmacists, physiotherapists and physician associates (who help diagnose patients, but do not prescribe). In the long term this shift should make things more sustainable, but staff require training and supervision. Clinics who try to cut costs by using physician associates risk a backlash from patients.

GPs who decide to call it quits are leaving the places that need them most. Researchers at the University of Cambridge found that between 2015 and 2022 the number of GPs per 10,000 patients increased from 5.6 to 5.8 in the richest areas of England; over the same period this number fell from 5.6 to 5.3 in the poorest areas. The most deprived quintile of areas in Wales, which includes Mountain Ash, also has the lowest number of GPs.

Part of the problem is that a practice's core funding is weighted mostly for age, not for deprivation, even though the needs of the poorest are greater. On the high street in Mountain Ash, houses with cracked plaster and blackened walls bear the signs of damp and mould, both of which are associated with many chronic illnesses. Children in the poorest areas are nearly twice as likely to be obese.

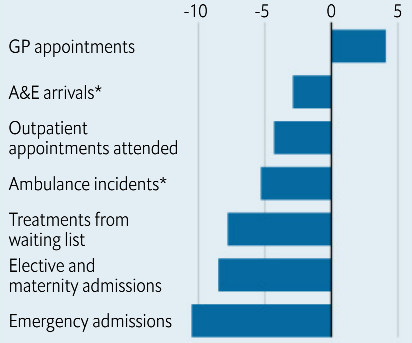
Patients in these places are also less likely to join the record numbers of people going private to bypass NHS backlogs, or to have the education to manage their health well for themselves. "We had a patient two to three months ago [who] went for a walk and part of her breast fell off," says Dr Ahmad. She had ignored the signs for so long that the tumour had burst through her skin, necrotising the surrounding tissue. In funding terms she would be worth as much to the surgery as someone who would pay for a private mammogram, says Dr Ahmad. "It doesn't make sense."

To try to alleviate the crisis, Britain is now training more new GPs than ever. But given difficulties retaining the ones it already has, the government appears to have quietly dropped its manifesto pledge from 2019 of a net increase of 6,000 new family doctors by 2024. Kamila Hawthorne, a colleague of Dr Ahmad's in Mountain Ash and the new chair of the Royal College of General Practitioners, the professional body representing GPs, is trying to promote the good side of general practice. Medical students need less convincing than those who have already qualified and are then training as family doctors. The students arrive "all misty-eyed and altruistic", she says. "The GP trainees see the workload." ■

Check ups and downs 2

England, NHS treatment volumes

Jan-Oct 2022, % change on Jan-Oct 2019



Sources: NHS England; IFS

*Jan-Nov 2022

A GP's personal account

1843, *The Economist*'s sister magazine, has published a GP's eyewitness account of the NHS crisis. Visit **economist.com/1843**

The royals

Spare us

Prince Harry complains some more, this time in print

WHAT IS THE most embarrassing moment in "Spare"? Is it when Prince Harry describes how he lost his virginity to an older woman who "smacked my rump" and used him "not unlike a young stallion"? Or when he talks about his frost-nipped "todger"? Or when he reveals that Meghan calls her pet dogs—British readers, look away—"fur babies"? Or, or, or...

Distance, Harry explains at one point in this book, "between Yourself and Them"—which is to say between Us and Him—is "an essential bit of being royal". But there is no distance here. None. You even get the freckles on his body as he strips naked and is checked for ticks at Balmoral.

When leaks from "Spare" started appearing on January 5th, a mood of delighted disbelief settled on British newsdesks. Royal correspondents used to subsisting on crumbs—an innuendo buried in six hours of anodyne Netflix nonsense here, a plucky first day of school for Prince George there—suddenly found themselves glutted by revelations on everything from how many Taliban (25) he killed in Afghanistan to his "nether regions". Best of all, these came not from press skulduggery but were offered up voluntarily by Harry for cash. The press had an embarrassment of riches; Harry had the riches of embarrassment.

In one way, this book is fun. Penguin, the publisher, had threatened a "literary memoir"; happily "Spare" is nothing nearly so dull. Its style is manly thriller. Its sentences are simple; *troubling thoughts occur to Harry in an italic font;* paragraphs are short and punchy.

For effect.

It is, in short, a romp. And obviously the access is excellent. Alan Bennett once wrote a novella about the queen in which he imagined the humdrum side of royal life, and this book does Bennettian humdrum better than Bennett himself. You learn that footmen served the young princes their TV dinners under silver domes, like kings in a cartoon; that his granny made a mean salad dressing; that King Charles III does headstands against a door in his boxers to help his back.

It is all very engaging. But it also feels somehow iffy. "Autobiography", George Orwell once wrote, "is only to be trusted when it reveals something disgraceful ...since any life when viewed from the inside is simply a series of defeats." This book manages to feel both like a series of defeats and somewhat untrustworthy at the same time. Things are rarely just Harry's fault. A decision to go to a fancy-dress party as a Nazi is explained away by saying that he was merely following the orders of Herr und Frau Obergruppenführer William and Kate. They look the sort. Camilla is a scheming villain; Charles is a duffer; an editor is a "pustule". Only Meghan—"she's perfect, she's perfect"—is exempt.

For all the romps, and the rumps, this book feels less like a lark than a terrible miscalculation. Harry presents himself as a creature in a gilded cage. Perhaps he hoped that, by writing a memoir, he'd set himself free. The cage isn't fashioned by the royals, however, but by the eyes of the audience upon them. By revealing so much, all he has done is draw the bars in closer. The Firm would have stopped him from producing a book like this. And that would have been a service. ■

Energy prices

Weathering the storm

Lower wholesale gas prices will provide only limited relief to consumers

"HE BLEW AND they were scattered," ran the inscription on English medals after a mighty storm helped save them from invasion by a Spanish armada in the 16th century. This winter, facing down an energy crisis provoked by Vladimir Putin's war in Ukraine, Britons might well thank the Lord for turning up the temperature.

A pan-European heatwave—as well as gusty weather for wind farms—has driven wholesale energy prices down across the continent. Unseasonable warmth, rather than energy-saving measures, explained the entirety of the fall in British gas demand from June to October, according to a study by academics at Imperial College London. The mild weather has largely persisted since. The cost of natural gas for delivery in February 2023 fell to about £50 ($61) per megawatt hour on January 1st, the lowest month-ahead price for a unit of gas since June 2022. Britain's households, however, will not see the benefits of falling wholesale prices. Instead it is the government that will pocket most of the windfall.

Retail prices depend on two government policies: a price cap set by Ofgem, the energy regulator, which limits how much providers can charge; and the government's energy-price guarantee (EPG), which fixes the unit prices that domestic users pay for gas and electricity and provides subsidies to make up the difference. During the first quarter of 2023 the cap will be set at the equivalent of a £4,279 annual bill for a "typical household", based on normal energy use. The EPG aims to keep bills for such a family to around £2,500.

Households pay only whichever of the two policies sets prices at the lower level. In other words, when the guarantee keeps bills below the price cap, as now, then the cap is irrelevant to bill-payers. Just as the government shielded households from the full force of the increase in wholesale gas prices in 2022, they will not benefit from their more recent fall.

Indeed, "for most people energy prices are going up," points out Emily Fry of the Resolution Foundation, a think-tank. The EPG will become less generous in April, as the government bids to reduce its cost. A typical household will pay the equivalent of around £3,000 for an annual bill. Although the price cap is forecast to fall at the same time—to £3,458, according to Martin Young of Investec, a bank—it will still be above the guarantee. (Higher consumer prices for gas will also raise headline inflation, although the Bank of England will focus on underlying price pressures.)

The Treasury will instead reap most of the benefits from lower wholesale prices. The Office for Budget Responsibility (OBR), a fiscal watchdog, forecast in November that the EPG would cost the government around £24.8bn (roughly 1% of GDP) in the fiscal year 2022-23 and an additional £12.8bn in 2023-24. That was predicated on prices peaking at £3.70 a therm in the first quarter of this year. Futures markets have it that the price for a unit of gas will be around half that level in March. Much can change, from colder weather to greater demand for gas from China, but the government could save around £22bn for the two years in which the EPG is due to run, reckons Investec's Mr Young.

Jeremy Hunt, the chancellor of the exchequer, will decide how to use these one-off savings—lowering government debt, perhaps, or providing extra funding to ease the crisis in the National Health Service. (A more fundamental change in the long-term outlook for energy prices would be needed before he could start cutting the tax burden.) He has already recycled some of the money into support for business.

On January 9th he announced that a cap on energy costs for firms will be replaced by a new scheme at the end of March, instead of simply expiring as originally planned. Businesses will then get a discount of £6.97 per megawatt hour of gas, so long as wholesale prices remain above a certain threshold. The government estimates the new scheme will cost £5.5bn compared with the OBR's estimate of £18bn for the previous policy. Despite the continued largesse, it will still feel to most businesses as if energy prices are rising.

Further falls in wholesale gas prices would provide more relief. These would be passed directly onto consumers and firms, as well as reducing inflationary pressure. For that, the warm weather has to hold. ■

The space business

Newquay, we have a problem

What the failure of Virgin Orbit means for Britain's space ambitions

IT WAS A slightly desperate example of the spin-doctor's art. "Historic UK mission reaches space, falls short of orbit," read the press release from Virgin Orbit, a satellite-launch firm, on January 10th. The night before, in front of crowds of space enthusiasts braving the weather, a converted jumbo jet had taken off from Newquay Airport in Cornwall, in south-west England, to perform the first-ever space launch from British soil.

The first part of the mission went well. Once the plane was safely over the Atlantic ocean, a rocket detached, ignited its engine and made for the sky. But about half an hour later, Virgin Orbit released a terse statement talking of an "anomaly". The firm later admitted that, although the rocket had technically reached space, it had not made it into orbit—and neither had any of the nine satellites it had been carrying.

Virgin
Virgin Orbit

Jumbo disappointment

It is not yet clear exactly what went wrong (other Virgin Orbit rockets have made it into orbit in the past). But the failure comes at an awkward time for the company, which hopes to carve out a niche offering cheap, small-scale launch services to the rapidly growing space industry. That market is highly contested, and Virgin Orbit's prospects looked shaky even before the launch. (After, its share price, already down by 75% over the course of 2022, fell by 12%).

It is also a bit of a setback for Britain's broader ambitions in the space business. The country has plans for seven "spaceports" (this year may also see launches, by different firms, from Sutherland and the Shetland Islands). Britain's high latitude, a drawback for some orbits, gives easier access to others; its proximity to the Atlantic means rockets can be aimed away from populated areas. Still, launching rockets, despite the glamour, is not where most of the value lies. BryceTech, a consultancy, put the value of the space business at £270bn in 2019—but the value of launch services at just $7bn.

Agricultural subsidies

The green revolution that failed

The longed-for transformation of English farming has not materialised

"There's been lots and lots of chat about it, and now it's happening," says Nic Renison, a livestock farmer in Cumbria. What has happened is that agricultural subsidies in England have been pruned hard enough that Ms Renison and others are seeing the effect on their bank statements. Puzzlingly, though, something more profound is not happening. The wholesale transformation of farming, which the government is trying to achieve through the subsidy cuts and other reforms, appears to have gone awry.

Farming was supposed to be one of the great opportunities opened by Brexit. Freed from the EU common agricultural policy, the British government could stop paying people simply for farming and start paying them for delivering public goods. Per-hectare subsidies would be wound down and replaced by payments for doing benign things like planting hedgerows, creating ponds and conserving carbon in soil. Farmland birds like corn buntings and turtle doves would return to the fields.

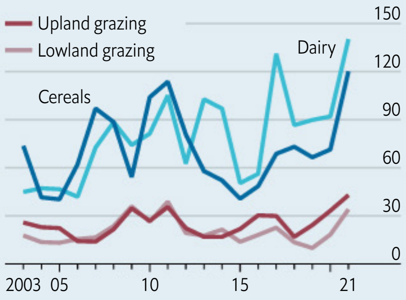
Other changes were expected to occur at the same time. Since (the thinking went) farm subsidies are capitalised into land values, their removal should take the pressure off prices. As a result, young people would find it easier to get into farming. Old farmers who were stuck in their ways would retire, encouraged by programmes that paid them lump sums to quit.

England has already embarked on these changes; Northern Ireland, Scotland and Wales are sticking with the old-style subsidies for now. Last year a small English farmer could expect to receive 20% less in per-hectare subsidies than he or she did in 2020, in cash terms. This year the subsidy is 35% lower, and by 2027 it will have vanished. Subsidies are being cut even faster on large farms.

The spoils of war

England, average income per farm*, £'000

2021-22 prices



Source: Business Farm Survey, DEFRA *Selected farm types

But it has proved easier for the British government to promise superior alternatives to the old EU subsidies than to actually create them. Many of the new environmental grants are still not available, or are only being piloted. Some of the ones that have been unveiled fail to impress. In 2020, before the cuts began, the per-hectare subsidy generally amounted to more than £230 ($280; the average English farm is 85 hectares). The new Sustainable Farm Incentive pays as little as £22 per hectare for soil conservation, although on January 5th the government said it would boost payments. Robin Milton, a farmer in Exmoor, says many of his fellow-farmers do not see the point.

Take-up of that scheme has been slow. The Department for Environment, Food and Rural Affairs says it has received about 1,980 applications from England's more than 100,000 farms. Some farmers are signing up for older environmental schemes. But many others seem determined to "try and farm their way out of the financial hole", says Joe Stanley, a cereal farmer and county chair for the National Farmers' Union in Leicestershire, Northamptonshire and Rutland. Some could become less environmentally minded.

If there is scant evidence that many farmers are becoming enthusiastic greens, there is even less sign of them leaving the land. Last year under 3% of farmers plumped for the government's one-off "lump sum exit scheme", barely more than the number of retirements you would expect in a normal year. Jason Beedell, director of rural research at Strutt & Parker, an estate agent, saw not a single case last year of a farmer persuaded to sell his or her land by subsidy changes. Farmland prices continue to rise, partly because investors see it as a haven. Strutt & Parker says that arable land values went up by 12% last year, while pasture rose by 13%.

Pastoral and present

Farmers increasingly derive income from many activities, which helps them to hang on even as subsidies are reduced. The Farm Business Survey shows that 47% of them rent buildings and 22% produce solar power. In the beautiful Langdale Valley in the Lake District, Jonathan Benson and Nicola Marsh have built wooden glamping pods with hot tubs on their farm. "We knew what was coming, and we've diversified," says Mr Benson, who also herds sheep and builds fences on other farms.

Even old-fashioned farming has lately been profitable, thanks to the hot, dry summer of 2022 and Russia's invasion of Ukraine, which has disrupted one of the world's great cereal-growing regions. The average English cereal farm brought in £120,100 last year, 68% more than the previous year and the most in real terms since figures began in 2003. Livestock and dairy farmers fared well, too (see chart).

Perhaps it is just too early to expect a transformation of English farming. Per-hectare subsidies are on course for further cuts. The government will roll out more environmental schemes, albeit painfully slowly, and farmers will grow more accustomed to them. In some years the weather will be bad, squeezing farm incomes. But it is also possible that jittery ministers will throw the entire process into reverse.

The National Farmers' Union has managed to persuade politicians that they ought to pay more heed to food security, which the NFU defines largely as growing more food in Britain. That could open the door to renewed subsidies. And English farmers can always complain that they are being treated differently from farmers elsewhere in the kingdom, where the old subsidies roll on.

Rural people tend to vote Conservative but can turn. Last June the Liberal Democrats won the Tiverton and Honiton by-election both by reminding voters about the behaviour of the then-prime minister, Boris Johnson, and by arguing that the Tories had neglected that mostly rural seat. Pausing the per-hectare subsidy cuts (something the Labour Party has supported) would mollify farmers fairly cheaply. As the next election nears, it will take a brave government to stay the course. ■

Bagehot | Napoleon's missing toothbrush

British museums and galleries are wrestling with the past, and largely losing

Forget Cézanne at Tate Modern. Forget Lucian Freud at the National Gallery. If you want to see something on a gallery wall that is really, as arty sorts say, challenging, head to the Wellcome Collection on Euston Road in London. On the white wall of this minimalist space you will find a similarly minimalist exhibit of six small holes; three above and three below. There's no label, though, and it's not quite clear at first what they are.

It is clear what they are not. They are emphatically not part of the Wellcome Collection's Medicine Man exhibition. Until late last year, this comprised an eccentric display of medical oddments—a glass eye; false legs; Tunisian amulets; Napoleon's toothbrush—acquired by the Collection's equally eccentric philanthropic founder, Henry Wellcome. At the end of 2022 the Collection announced that the exhibition "perpetuates a version of medical history that is based on racist, sexist and ableist theories" and shut it two days later. Napoleon's transgressive toothbrush vanished; racists and ableists everywhere were doubtless chastened.

Poor old Wellcome. The past is another country and they did things differently there, much to the embarrassment of the present, which really would rather that they hadn't. All British museums and galleries are squirming. Some are alleviating the awkwardness by loaning or returning things: the Horniman Museum in London has handed back its Benin Bronzes. The British Museum is perpetually in "talks" over the Parthenon sculptures. Others have hidden objects away: the Pitt Rivers Museum in Oxford has removed its shrunken heads from view, explaining that they "led people to think in stereotypical and racist ways" about those who cut off their enemies' heads and then shrink-dried them.

Most have started to accompany their displays with labels rich in sorrowful subjunctives. In a recent William Hogarth exhibition at Tate Britain, a much-mocked label next to a painting of Hogarth sitting on a chair noted that the chair was made from colonial timbers. Might the chair's limbs "stand in for all those unnamed black and brown people enabling the society that supports his vigorous creativity"? In the Burrell Collection, in Glasgow, a label observes that contemporary critics of the artist Édouard Manet often compared his paintings of women to pieces of meat. Might we be "seeing more [in this picture] than just a painting of a ham?" asks the label next to a Manet painting of a ham.

The Wellcome Collection tried labels for a while, before deciding that the exhibition devoted to its founder was irretrievable. Henry Wellcome's collection was a "vast personal project, the privilege of a wealthy white man in the Victorian era". The exhibition told a story in which "disabled people, Black people, Indigenous peoples and people of colour were exoticised, marginalised and exploited—or even missed out altogether". So they shut it.

Some of this is sensible. People in the past did awful things; it is right to think about those things, carefully. If objects have clearly been nicked, it is absolutely right that they should go back. But it is absolutely wrong to do what the Wellcome Collection has, and forget the most obvious thing about the past—namely, that it isn't another place at all. The past is merely the present, yesterday. We, today, will be in it tomorrow. The clumsy closing of the Medicine Man exhibit is in the past already. And it already looks bad.

History rarely looks kindly on those who put the past on trial from the vantage point of the present. Consider Pope Formosus, a ninth-century pope who annoyed a successor, Pope Stephen VI. Stephen's chief problem with Formosus wasn't merely that he was irritating; it was that, since the papacy is held for life, he was dead. Undeterred, Stephen had Formosus's rotting corpse exhumed, dressed in full papal regalia, put on trial, found guilty, mutilated and then tossed into the Tiber. Today the Cadaver Synod is, in a highly competitive field, considered one of the finest examples of Vatican idiocy in history. Museums and galleries that mutilate their collections to conform to present fashions tend to look similarly absurd. People still smirk at the Gabinetto Segreto in Naples, in which the ruder relics of Pompeii were locked away.

In one sense, mutilating a collection is a curator's job. Museums are famously icebergs; most of their collections are not on show. It is the job of the curator to cut bits out and put others in. What they cut and what they keep will change over time, as it should. What feels much less right is when it is not art or interest but ideology that is shaping choices.

Un-Wellcome reminders

The job of history is not, as Hilary Mantel once said, to issue "report cards" to the past. The sanctimonious word soup being spread over museum and gallery walls is not necessarily wrong in its conclusions—which are often spot-on. But it is wrong in its aim, which is to tell people what to think. And that is exactly what history should not do. One of the most mocked history books of the 20th century was "Our Island Story", which was parodied in "1066 and All That" for its habit of briskly dismissing moments in history as "A Good Thing" or a "A Bad Thing". In contrast, Mantel's own "Wolf Hall" took Thomas Cromwell, one of history's most infamous villains, and made him, if not a hero, then at least someone you rooted for. You thought again. You thought at all.

It is the job of history—and therefore of galleries and museums—to make you think. To make you wonder, of any moment in the past: what was the right thing to do? What was the wrong one? Happily, the Wellcome Collection has a temporary exhibit of its own that does just that. Just head over to where Medicine Man used to be. You might have trouble finding it: labels have been stuck over the name in the lifts; in the newly reprinted maps it has already, Soviet-like, vanished. But look carefully and you can still find those six holes on the wall. As you look, it slowly becomes clear what they are: they mark where the sign for the Medicine Man exhibition used to hang. And that does make you think. ■

Europe

TOUCHE PAS À MA RETRAITE

French pension reform

Macron’s retirement gamble

PARIS

The government wants the French to work longer. Good luck with that

The French government has decided to go ahead with a controversial pension reform that looks set to divide the country and spark social unrest. On January 10th Elisabeth Borne, the prime minister, unveiled the details of changes to the country’s mandatory pension rules. The fate of these measures will test Emmanuel Macron’s ability to continue to reform France during his second presidential term.

The centrepiece is a raising of the legal minimum retirement age from 62 to 64, by 2030. This measure is deeply unpopular with the French, but in line with Mr Macron’s campaign promise ahead of his re-election in April 2022. Ms Borne’s package includes an increase of €100 ($107) a month to €1,200 for the minimum state pension, which is paid to those who have made the required contributions over a lifetime. The prime minister made other concessions designed to win political support, including extra pension credits for those who have physically demanding jobs or began to work when very young.

France’s new pension rules are at once bold, overdue and less radical than once planned. Bold, because the decision to go ahead at all comes in the middle of a cost-of-living squeeze, as part of the fallout from Russia’s invasion of Ukraine. Thanks to generous French state subsidies and caps on price increases, the country’s inflation rate, at 6.7%, is one of the lowest in the euro zone, and fell in December. But the French still feel the pinch in their pockets, and this will get worse. This year the government is allowing energy bills for households to rise by 15%, up from 0-4% in 2022. Corporate bills are soaring. Small businesses are under particular stress.

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— Charlemagne is away

The reform is bold politically too. Few outside Mr Macron’s party and his support base want it, though the employers’ federation applauded. Fully 68% of the French and 77% of 35- to 49-year-olds are against a rise in the pension age to 64. All the country’s trade unions are against any increase in the retirement age, including—to Mr Macron’s frustration—the Confédération Française Démocratique du Travail (CFDT), a moderate union. Its leader, Laurent Berger, called it “one of the most brutal pension reforms for 30 years”. Most opposition parties also oppose the reform. Indeed Marine Le Pen’s nationalist-populist National Rally, and Jean-Luc Mélenchon’s Unsubmissive France on the left both want to lower the retirement age to 60, at least for some workers. A first day of protests and strikes has been called for January 19th.

In any event, the reform is overdue. Mr Macron has been promising it since he was first elected, in 2017. Endless consultations, mixed messaging and a failure to build a consensus around a previous version, in 2019, led to the longest period of strikes in France since the uprising of 1968. This first attempt by Mr Macron was finally shelved when covid-19 struck in 2020.

Yet France cannot afford to keep things as they are. At 60, the average age at which French men actually retire (for women it is 61) is the third-lowest in the OECD, a group of mainly rich countries. Thanks to a high life expectancy, a retired man then spends an average of 23.5 years in his armchair (and a French woman 27 years), the second-longest. The share of 55- to 64-year-olds still at their desks is just 57%, compared with 74% in Germany and 65% in Britain. Indeed many firms edge out workers before retirement. The government says it will now make them publish statistics on the employment of older workers, to nudge them into better behaviour.

This lifestyle comes at a cost. France spends 14% of GDP on public pensions, nearly double the OECD average. By 2030, according to Bruno Le Maire, the finance minister, the deficit in the French pensions system will reach €14bn. The new measures should comfortably close that gap. "Given the current environment of upward pressure on interest rates, this pension reform is an important message to investors," says Ludovic Subran, chief economist at Allianz, an insurer.

Overall, however, the reform is less radical than the one that Mr Macron originally dreamed up. When first elected, he wanted to bring in a universal points-based system, in order to make sense of the labyrinthine system of regimes and rules that governs different employees' rights. As it is, most French workers have no idea of their exact retirement entitlement, which in turn muddles decisions about staying on at work later in life. If France is to raise the share of older workers in jobs, it needs at some point to make things simpler.

The government's new rules now need to go to parliament. The best hope for Mr Macron, who lost his majority there last June, is to secure the support of the opposition Republicans. The president's centrist alliance holds 250 seats, 39 short of a majority. But the Republicans, who when in power themselves raised the retirement age, are not keen to hand Mr Macron an easy victory. If a parliamentary majority cannot be found, the government may have to resort to using a special provision of the constitution to force the rules through, at the risk of prompting fresh elections.

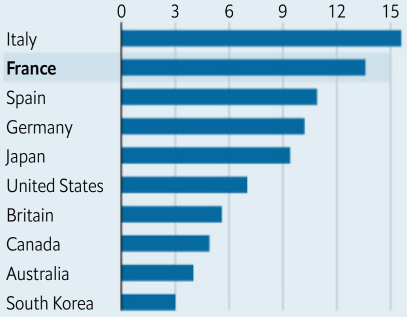
Technically, in other words, Mr Macron could get this reform on the statute books by September, as the government wants. The stiffest opposition, though, may come not from the benches of parliament but from the street. Unions and opposition parties promise demonstrations. New forms of protest and industrial action could yet emerge. Strikes over the Christmas period at the SNCF, the national railway, were organised via Facebook without the support of the unions.

In short, France looks set for a period of unrest. Mr Macron remains unpopular, with an approval rating of only 36%. Any ill-considered remark on the new proposals that slips from his tongue could sour the mood yet more. If the president is to leave a mark on his second term, he may have little choice but to hold firm, stay quiet, and sit it out. ■

Silver strain

Government spending on pensions as % of GDP

2018 or latest



Source: OECD

Ukraine

Little green mayhem

OSKIL

The war has devastated the environment, too

BEFORE THE Russian invasion, people from nearby villages used to flock to the banks of the Oskil reservoir, which stretches for about a hundred kilometres south of Kupyansk, in eastern Ukraine, to swim, listen to birdsong and catch fish. Today, much of the area is changed beyond all recognition. Destroyed villages, recaptured by the Ukrainians during a counter-offensive four months ago, charred trees and the husks of Russian tanks line the reservoir's eastern banks. Last spring, to prevent Russian troops from crossing the Donets River, downstream from the Oskil, Ukrainian forces blew up the reservoir's floodgates. The move helped slow the Russian advance. But it also spelled doom for the Oskil. Over 350m cubic metres of water gushed out of the reservoir. The water level plunged, exposing great swathes of the reservoir's bed. Birds that once nested in the area disappeared. Some 2m fish are thought to have died. Local wells have dried up.

Forests ravaged by fires caused by relentless shelling, or cut down to build trenches; groundwater and soil contaminated by heavy metals and toxic chemicals from detonated munitions; and wild animals killed or driven from their habitat: these are some of the less talked-about victims of the war in Ukraine. Because about 18% of the country remains occupied by Russian forces, measuring the impact of the invasion may be impossible as long as the fighting rages. But even the fragmented data available reveal a picture of environmental catastrophe.

Since the start of the war, Ukraine's environment ministry has recorded almost 2,300 instances of environmental damage caused by the fighting. About 2.9m hectares of the country's protected areas, home to thousands of species of plants and animals, are at risk of destruction, the ministry estimates. Another 3m hectares of forests, about a third of the total, have been affected by the fighting already. Of these, at least 23,300 hectares have completely burned down. Illegal logging has been documented at many of the 18 national parks and nature reserves that have been illegally occupied by the Russians. The war, say Ukrainian officials and scientists, is also to blame for the deaths of thousands of dolphins in the Black Sea, killed by mines and sonar from Russian submarines. (On the other hand, air quality in parts of Ukraine has improved because of lower traffic.) Other dangers, notably the risk of damage to the Zaporizhzhia nuclear power plant, occupied by the Russians since early March, lurk ahead.

So far, the combined damage already amounts to more than $46bn, which Ukraine will in time demand as war reparations from Russia, according to Ruslan Strilets, the Ukrainian environment minister. Air pollution, at $27bn, accounts for the bulk of the sum. In only ten months, over 42m tonnes of carbon dioxide, roughly the same as the annual emissions of Bulgaria, have been released into the atmosphere as a result of the war, the ministry says. Forest fires caused by shelling, as well as Russian attacks on Ukrainian depots, which have caused 680,000 tons of oil and fuel to go up in flames, are mostly to blame for the emissions.

The war has poisoned large areas of Ukrainian farmland. Dangerous chemicals and fuels, released from exploded rockets and the tens of thousands of artillery shells ▸▸

Collateral damage

that are being fired by both sides every day, have leaked into the ground along the length of the front line. Such contamination can harm local ecosystems and crops decades after the guns have gone quiet, says Olexiy Angurets, the author of an upcoming report on the war's impact on the environment. Damage to farmland has already cost Ukraine $18bn, says the environment ministry.

Ukraine's environmental record was hardly stellar before Russia invaded. The country ranked 52nd (out of 180) in last year's Environmental Performance Index, a measure compiled by experts at Yale and Columbia universities. Post-war reconstruction may offer a unique chance for improvement. "What we're afraid of is that recovery will be just a few green projects here and there," says Tetiana Riabokin of the World Wildlife Fund. Ukraine needs to place the transition to a low-carbon economy at the heart of its recovery plan, she says. This would also make the programme more palatable to foreign donors and taxpayers, and improve Ukraine's prospects for EU membership.

For the most part, repairing the harm done to the environment will have to wait until the end of the war. But some projects are already going ahead. Over the past year, Ukraine's forest agency has planted over 180m new trees as part of a reforestation programme. In late September its foresters opened a tree nursery a few kilometres from the border with Belarus, from where one wave of the Russian assault came in February 2022. "We showed them we're not scared," says Mr Strilets, "and that victory will come." ■

Greece and Turkey

Gyros and gunboats

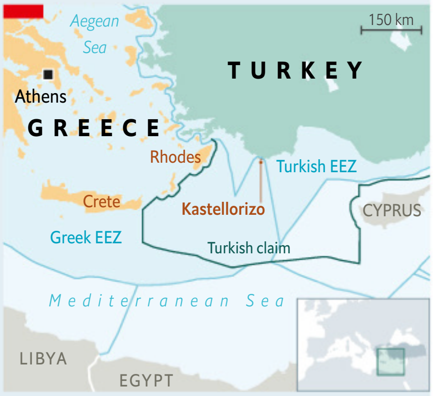
KASTELLORIZO

A tiny flashpoint in the eastern Mediterranean

Kastellorizo, a small Greek island in the Mediterranean, home to only a few hundred people, does not look like a flashpoint. Dozens of pastel-coloured houses rise from the shores of its main bay. Locals exchange greetings with tourists and daytrippers arriving by ferry from Turkey. A large sea turtle pokes its head out of the turquoise waters nearby.

But not all is well. A Greek warship, the HS *Daniolos*, patrols the waters around the island. A couple of army trucks watch over the harbour. A few troops trickle out of a cruise ship, which has come from Athens. Kastellorizo has recently taken centre stage in a dispute between Greece, to which the island belongs, and Turkey. Greece says Kastellorizo enjoys a continental shelf area, or Exclusive Economic Zone, of 200 nautical miles, in line with the UN Convention on the Law of the Sea. Turkey says Kastellorizo is too small and far from the Greek mainland to be entitled to an EEZ. The Greek claim locks Turkey out of the Mediterranean, Turkey complains.

Turkey challenges Greece's sovereignty over Kastellorizo and a number of other islands. Last month its president, Recep Tayyip Erdogan, said Turkish ballistic missiles could strike Athens. "We may suddenly come one night," he had warned a couple months earlier, suggesting an invasion. Turkey's shores are within swimming distance of Kastellorizo. The nearest Greek island, Rhodes, is 120km away.



A number of things militate against the risk of armed confrontation between Turkey and Greece. One is the fact that both are members of NATO. The other is that war would crush each country's tourism sector. But the risk is there, also because Mr Erdogan's government has developed a taste for using force in pursuit of its interests, especially in Syria.

Turkey accuses the Greeks of militarising the islands, contrary to international treaties. Last year, Turkish media outlets published images, captured by drones, showing deliveries of armoured vehicles to some of the islands. Greece does not deny sending new troops, but says it is doing so only for defensive purposes. With elections scheduled in both Greece and Turkey this year, nationalists on both sides may be tempted to rattle their sabres. The locals on Kastellorizo, as well as the visiting Turks, are trying to tune out the noise. "It's only theatre," says a waiter. NATO leaders should hope he is right.

Turkey

Taking aim at the Kurds

ISTANBUL

Turkey may be on the point of banning the main Kurdish opposition party

Turkey's biggest Kurdish party is banned from spending its own money. Its mayors, despite the fact that they have been directly elected, have been removed from city halls and replaced with caretakers appointed by the government in Ankara, the capital. The party's former leader, Selahattin Demirtas (pictured on following page), has been imprisoned since 2016. And now it looks as though its elected members of parliament could be expelled and the party banned, ahead of national elections that are due to be held in June. Welcome to democracy under President Recep Tayyip Erdogan.

The decision is "99% made", says Ertugrul Kurkcu, one of the members of parliament in question for the People's Democratic Party (HDP). "We can say the HDP has already been closed."

The HDP made history in June 2015 as the first Kurdish-rooted party to win more than 10% of the vote, then the threshold to take seats in parliament. It managed to reach beyond its ethnic base to win votes from liberal Turks, depriving Mr Erdogan's Justice and Development party (AK) of an outright parliamentary majority for the first time since it took power in 2002, and obliging it to rule in coalition.

Since then, the HDP has spent much of its time fighting indictments. Mr Erdogan accuses it of links to the Kurdistan Workers' Party (PKK), a banned separatist militia that has been waging an insurgency in south-eastern Turkey since the early 1980s. Last week Turkey's constitutional court slapped a block on the bank accounts that hold HDP's state funding, citing its "organic ties to the PKK". This means that it has no access to 539m lira ($29m) that it was due to receive this year. This week, in the same court, the prosecutor presented evidence in a mass terror case against 451 party officials, including all but four of its 56 MPS, accusing the HDP of acting as the PKK's "recruitment agency". If found guilty, they will be banned from holding elected office for five years. In a parallel case, the prosecutor has asked for the party's closure.

Mr Erdogan and his allies insist such trials are purely judicial, and free from political interference. His opponents disagree. They say that the courts have been almost entirely captured since a coup attempt against the president in 2016 and the huge purge of the public sector that followed. More than a quarter of Turkey's ►►

SELAHA
EMİRTAŞ

The lost leader

judges and prosecutors were sacked and replaced, and its top courts gradually filled with loyalists. "It is not the constitutional court, it is the AKP court," Mr Kurkcu says.

Banning the HDP may help Mr Erdogan and his coalition partners win at the parliamentary election, but it is a gamble. If banned, the HDP could regroup as a new party, as others have done in the past (Mr Erdogan's own AK party is an example of that), although it may not have time to do so before the election, and all its most experienced officials will probably be banned from running. The main six-party opposition coalition may struggle to win homeless HDP voters, because one member is a nationalist party. However, it would probably benefit more than AK, which has been tarnished in Kurdish voters' eyes by Mr Erdogan's military operations against the PKK and his crackdown on Kurdish civil society.

There would, in fact, be some benefits for Mr Erdogan should the HDP remain in the presidential race, which is taking place at the same time as the parliamentary one. If the HDP fields its own candidate, separate from the joint nominee (still to be chosen) of the six-party coalition, that would split the opposition vote and could push the election to a run-off round. "This is the beginning of a negotiation, with the HDP saying don't shut us down, and we'll nominate someone," says Can Selcuki, founder of Turkey Report, a polling firm.

A succession of Kurdish parties have been banned in Turkey over the past three decades. But no previous one has come close to the success that the HDP has enjoyed, and it is for that reason, its supporters say, that the cases being brought against it are so comprehensive. "This is a wide liquidation decision," said Saruhan Oluc, chairman of the party's parliamentary group. "To try to close a party that is heading into elections is a strike against the democratic space." ■

Nagorno-Karabakh

No way in

The Armenian enclave has been blockaded by Azerbaijan

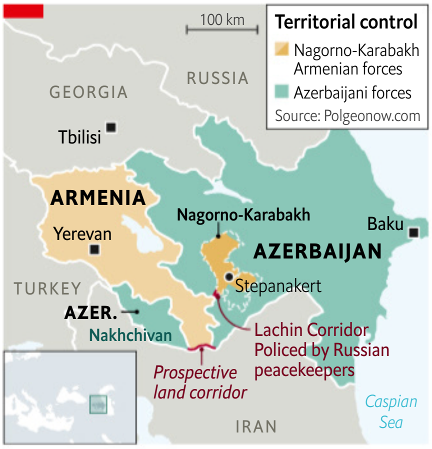
The shelves at the Gurman supermarket in Stepanakert, the main city of Nagorno-Karabakh, are empty. There are occasional deliveries of milk from a local dairy, "and people line up for it", says Svetlana Martirosyan, an employee. But they have to bring their own jars since the dairy ran out of containers. "Sometimes we also get sugar, and we distribute it, a half kilogram per family. There isn't anything else."

Karabakh has in effect been under blockade for nearly a month, since a group of Azerbaijani government-supported protesters launched a demonstration on the only road connecting the enclave to Armenia and the world beyond. As a result, traffic on the road has almost vanished, and the tens of thousands of ethnic Armenians living in Karabakh are cut off.

The protesters' ostensible demand is that Azerbaijani environmental officials be allowed to visit mines in Karabakh that they say have been illegally expropriating the mineral resources of Azerbaijan. It is a pretext that few, including the leadership in Baku, Azerbaijan's capital, take seriously. The real goal appears to be to ratchet up pressure on the Armenians to cede more sovereignty over Karabakh.

A short war in 2020 saw Azerbaijan regain control of much of the territory it had lost to Armenia in the first war, in the 1990s. Now Azerbaijan is pushing for a deal that would complete that victory, cementing its control over the remaining parts of the enclave and establishing a land corridor through Armenian territory to connect mainland Azerbaijan with its own enclave of Nakhchivan (see map).

The immediate aim of the blockade appears to be to establish Azerbaijani checkpoints on the road to Stepanakert. "It is our legitimate right," Azerbaijan's president, Ilham Aliyev, said last month. "This is our territory, recognised by the international community."



Source: Polgeonow.com

But the move is part of a wider push by Azerbaijan to take advantage of a favourable international environment. Russia, the big regional power and Armenia's traditional patron, is bogged down in Ukraine. Russian peacekeepers, deployed as part of the ceasefire agreement of 2020, are supposed to provide security on the road but have been impotent in the face of the protests. Meanwhile, the European Union, which is brokering the peace talks, has embraced energy-rich Azerbaijan as a part of its strategy to wean the European continent off Russian gas.

On the ground, though, the Armenians are digging in. Ruben Vardanyan, the de facto ruler of Karabakh, says the pressure will not work. "We can stay a long time in these conditions," he says. "It's not about food. It's about are we living in our homeland, or will we be part of Azerbaijan?"

Mr Vardanyan, a Russian-Armenian billionaire well-known for his philanthropy in the Armenian world, rose to power in Karabakh quickly and in murky fashion: he unexpectedly renounced his Russian citizenship last autumn and moved to Stepanakert. Within two months he was in charge. His arrival has enraged Azerbaijanis, who see him as a Kremlin asset there to sabotage the peace talks. Formerly an adviser to Vladimir Putin, Mr Vardanyan is cagey about his current ties to Moscow and studiously avoids criticising Russia.

International pressure has mounted against the blockade, but Mr Aliyev remains defiant. "No one can influence us," he said last month. "There may be some phone calls and some statements, but we do not need to pay attention."

The protests remain popular among Azerbaijanis because they are seen as undermining the Russian peacekeepers, says Zaur Shiriyev of the International Crisis Group, a think-tank. But Mr Aliyev and his allies will need results, such as the visits to the mine the protesters demand and perhaps some sort of official Azerbaijani control over what passes along the road. Ending up empty-handed could be risky for Mr Aliyev's government. It all augurs a rocky 2023 in the Caucasus. ■

Congress

House rules

WASHINGTON, DC

After a spectacularly chaotic start for Congress, more discord looms

Having a prolonged fight over a prenuptial agreement on the eve of a wedding hardly bodes well. It may not thwart the ceremony altogether but it certainly increases the chances that the union will be nasty, brutish and short. Such is the lot of Kevin McCarthy, the newly minted Republican speaker of the House, who had to endure four days of agonising negotiations with members of the Freedom Caucus, a hardline contingent of his own party, before he could obtain power. Rather than pedestrian haggling over alimony or unseemly furniture, however, Mr McCarthy had to trade away a considerable amount of his own power and pre-commit to aggressive fiscal hawkishness.

One of the more important powers he ceded in this negotiation was the ability for any single member to call for a vote of no confidence. Just five sufficiently irate defectors within his own party would, when banding with the opposition, be enough to depose the man. The gun held to Mr McCarthy's head before his ascension is still there. This matters for how America will govern itself for the next two years (and, quite possibly, beyond that).

Exactly how damaging the results will be is not yet clear. Some of the agreements that Mr McCarthy made were officially ratified on January 9th in the 55-page rules package that sets the terms for the next Congress. Others were gentlemen's agreements, apparently drawn up in a secret three-page addendum, which have not yet been revealed. But three preliminary conclusions can already be drawn: Mr McCarthy will begin his job as one of the weakest speakers of the modern era; the policy agenda of the Republican Party is confused, to say the least; and the federal government is even more likely to return to its chaotic pattern of lurching from one self-made crisis to the next.

Start with the person some are already calling the "speaker in name only". The threat of defenestration always overshadowed the difficult speakerships of Republicans John Boehner and Paul Ryan. At the start of her turn at power in 2019, Nancy Pelosi, the Democratic leader, managed to defang the "motion to vacate", which is how the House gets rid of speakers. And although Mr McCarthy, having witnessed all of this while in opposition, resisted the reinstatement of this rule, he was eventually forced to accept that his employment is, like for so many Americans, at will.

Rather than being able to punish members of the Freedom Caucus for their intransigence, as he once threatened, Mr McCarthy is having to dole out rewards. A powerful campaign-expenditure group associated with him has agreed to stay out of certain primary elections, largely to the benefit of prospective hardline candidates.

Three members of the Freedom Caucus will sit on the powerful Rules Committee, which controls when and how bills are debated on the floor of the chamber. This committee is the primary vehicle through which the speaker controls the business of the legislature. Ceding three seats to the Freedom Caucus, however, ensures that these members would have a de facto veto over Mr McCarthy's agenda. The conces-

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sions have led some moderates to bristle. "I'm not going to be held hostage by anyone," says Nancy Mace, a Republican congresswoman from South Carolina who briefly entertained the idea of voting against the rules package.

Asked whether or not he thinks the speaker will hold true to his commitments, Scott Perry, a Republican representative from Pennsylvania and chairman of the Freedom Caucus, replies swiftly: "I sure do or I wouldn't have made them. I don't think they're overly difficult." Many of the concessions extracted by Mr Perry and his colleagues, who forced Mr McCarthy to endure 15 excruciating roll-call votes while a deal could be hashed out, are procedural. A lot of them relate to rushed consideration of must-pass legislation "We asked for the tools necessary to be able to stop what just happened right before Christmas, which was 4,000 pages dropped at two o'clock in the morning or something like that spending $1.7trn with 7,200 earmarks," says Mr Perry, referring to the omnibus spending package passed in the waning days of the lame-duck Congress.

New rules

The new rules require 72-hour notice for legislation, "germaneness" requirements aiming at limiting the addition of extraneous provisions and make it easier for congressmen to actually debate legislation on the floor of the House and offer amendments. The extraordinary consolidation of power within congressional leadership has meant that members are treated more as partisan automatons than thinking legislators. These seem like improvements, even if they will slow the pace of lawmaking and may make dealmaking harder.

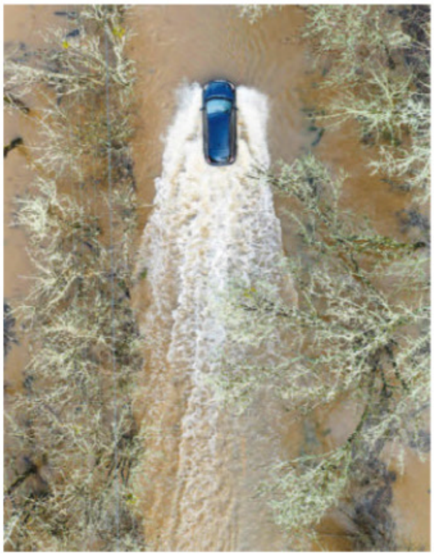
But the policy concessions that Mr McCarthy was forced to give are different. They show that there is still little coherence in the Republican platform after the tumult of the Trump era, in which many of the basic intuitions of conservatives on matters like trade, foreign interventions and the rule of law were turned upside down. What remains is a cacophony of past ideas and their dim echoes. The mid-1990s bombast lives on, though the sweeping agenda of Newt Gingrich's famed "Contract with America" is only palely imitated by Mr McCarthy's own "Commitment to America", which fits on a single page. The new supermajority requirement to raise new taxes and pledges to enact spending cuts echo the starve-the-beast anthem of Grover Norquist, the anti-tax activist of the same era. The creation of a new select committee to investigate "the weaponisation of the federal government" as a platform for counter-investigations of the Justice Department reflect the paranoid style of Donald Trump.

Even before the inauspicious beginning to the new congress, American pundits had feared a return to the brinkmanship over budgets that dominated most of Barack Obama's presidency. Then, Republicans forced government shutdowns and nearly pushed the country to partially default on its debt payments in the hopes of extracting spending cuts, which was successful, and compelling the president to repeal his signature health-care law, which was not. The new power dynamics made apparent in Congress have only raised the probability of a return to this. Only it is not clear what House Republicans would want in return: the chaos may be the point.

Some members of the Freedom Caucus have a particularly volatile mix of ideologies: fiscal hawkishness, a libertarian mistrust and dislike for authority and a breezy, populist self-assurance. Mr Perry, the Freedom Caucus chairman, says votes to raise the debt ceiling, a self-imposed cap, are "a moment of clarity" and should be subject to negotiation. "If we're just going to continue to increase the debt ceiling without addressing what causes the debt ceiling to increase, I think that's a pretty hard sell for most conservatives," he says. Ms Mace, the relative moderate, agrees, too. "I'm not going to be supporting a debt ceiling vote unless there's a plan to rein in spending or balance the budget over the next ten years," she says.

Throughout the Trump years, the Republican concerns about the debt seemed to go into hibernation, when the party passed a big tax cut even as the economy boomed. Even now, the new rules are aimed at slashing spending, but leave open the possibility of further tax cuts, which would worsen the country's fiscal position. "What you want is all politicians to let go of their pretend ways of fixing things," says Maya MacGuineas of the Committee for a Responsible Federal Budget, a think-tank. "Pretending that there's space for more tax cuts, without companion spending cuts, is just continuing to push an illusion and that leads to a loss of trust."

Yet even if Mr McCarthy is forcibly led more than he leads, a minority of Republicans will not be able to dictate terms to a Democratic-controlled Senate and White House. However chaotic the legislative process becomes, the outcomes may, as a result, look more normal. Government spending is probably not going to increase. New fears that isolationist Republican congressmen might slash defence spending either for reasons of austerity or Russophilia may be overblown given that Chuck Schumer, the Democratic leader in the Senate, and Mitch McConnell, the Republican leader in the Senate and ardent supporter of American support for Ukraine, would have to sign off, too. But if they do not get their way, Mr McCarthy's marriage with his party's right could end unhappily. ■



Climate change

Mega-problems

LOS ANGELES

What California's storms reveal about the state's climate future

FEW THINGS are as welcome in California as rain. Bemoan an overcast sky and you will inevitably get some version of "We need the moisture" in reply. But when it began to pour on New Year's Eve, kicking off more than a week of storms and interrupting a three-year period of extreme drought, this felt like a release of biblical proportions. The usually placid Los Angeles river raced through its concrete channel towards the Pacific. About 1,000 trees around Sacramento, the state capital, toppled over. As of January 11th, at least 19 people had been killed by winter storms. More than 30m Californians were living under flood warnings. And more wet weather was on the way.

The storms battering California are known as atmospheric rivers, which act as elongated corridors—hundreds to thousands of miles long—that carry water vapour through the atmosphere in a particular direction. Atmospheric rivers usually make landfall on the west coasts of North America, Chile, South Africa, Europe and Australia, explains Daniel Swain, a climate scientist at the University of California, Los Angeles. At their mildest, the storms can just make for a rainy day.

At their most severe, they rival the hurricanes that clobber America's east coast. California usually gets its winter rain from atmospheric rivers. The difference this year is the high number of storms in quick succession. Once soil is saturated with moisture from one storm, it needs time to ▸▸

recover before it can absorb more rain. But this time the storms came one after another. When rivers burst their banks, soil parched by years of drought could not soak up the excess water, leading to flooding. Tree roots made brittle by a lack of moisture could not withstand high winds and floodwaters. Areas burned by wildfires are susceptible to flash floods and mudslides.

It may seem confusing that California is underwater while the American southwest is in the grip of its driest 22-year period for at least 1,200 years. But the Golden State's severe drought and flooding are both consequences of the warming climate, as the relationship between wildfires and floods suggests. When temperatures rise, the atmosphere can hold more water vapour. A thirsty atmosphere will suck up more water from rivers, reservoirs and soil. This is called "evaporative demand". When the atmosphere is fully saturated—think of a wet sponge—it will wring itself out, causing precipitation. A study published in 2018 in *Nature Climate Change* suggests that California will probably experience 25% to 100% more "whiplash" events, where the state passes quickly from an extremely dry summer to a very wet winter.

While officials are focused on water scarcity, worries about a possible "megaflood" to rival the megadrought are spreading. In August Xingying Huang, of the National Centre for Atmospheric Research, and Mr Swain published a study suggesting that climate change has already doubled the risk of catastrophic flooding caused by a month-long series of strong atmospheric rivers. Such a flood, they argue, would temporarily turn the Central Valley, the state's agricultural powerhouse, into an inland sea, and inundate Los Angeles and Orange Counties, where 13m people live.

These storms will pass, and summer may erase the gains made in reservoirs and groundwater basins. Attention will again turn to drought management. But the increase in whiplash events reveals a need to adapt to different types of extreme weather, not just water scarcity. Jeffrey Mount of the Public Policy Institute of California, a think-tank, argues that the Central Valley should be building levees farther back from the banks of the Sacramento river, to give the waters more room to roam. In addition to reducing flood risk, wider floodplains could help more water seep into underground aquifers, refilling groundwater basins that have been depleted by farmers.

Joan Didion, an American writer and a daughter of Sacramento, once described the uncertainty of living beside the valley's rivers. "I think of the rivers rising," she wrote, "of listening to the radio to hear at what height they would crest and wondering if and when and where the levees would go." ■

Army recruitment

Marching on their stomachs

FORT JACKSON, SOUTH CAROLINA

With a shortage of recruits who can pass physicals, the army is creating its own

A FEW MONTHS ago Michael Devey, an obese and homeless 22-year-old, wandered into the army recruitment office in Sacramento, California. Desperate for a bed and an income, he longed to enlist but knew his size precluded him. It turned out to be his lucky day. A brand-new programme to whip overweight recruits into shape was just kicking off. Mr Devey signed on the dotted line and within weeks shipped out to Fort Jackson, South Carolina, for army fat camp.

America's army is starved for recruits. In the past year it enlisted only 75% of the number of soldiers it had aimed for. Just 23% of 17-to-24-year-olds are eligible to serve, a fraction of whom want to. The share of Americans who meet the academic and fitness criteria is dwindling, a problem only exacerbated by remote schooling and pandemic lockdowns. And millions are disqualified because of obesity.

In July army officials realised that they were going to miss their year-end recruiting target—by a lot. "We went from flash to bang," says Major-General John Kline, who is in charge of training for the force." Nobody saw that strong a drop coming." To get bodies on base they launched the Future Soldier Preparatory Course, a two-pronged scheme to help previously ineligible recruits lose weight or get up to speed on reading and maths.

To join the army a 5' 10", 20-year-old male must weigh under 180lb. The fitness track of the new programme allows recruits to be up to 6% above their weight threshold, a number determined by age, gender and height. To continue to basic training, trainees must shed the extra pounds within 84 days. A regimen of early-morning workouts coupled with classes on mindfulness, nutrition, resilience and sleep gets them there. So far 850 recruits have passed through the training. None has missed their targets.

"This is not *The Biggest Loser*," warns Major Chris Wedge of the 165th infantry brigade, where the programme is housed. The course aims to instil good habits. Those who slim down too fast—say, by eating too little—are carefully monitored by drill sergeants. Short-term change will not serve them well, as the army audits weight throughout a soldier's career. Registering as too heavy twice in one year can be grounds for permanent discharge.

Although the armed forces enlist many more soldiers from prosperous families than half a century ago, the Future Soldier Preparatory Course recruits tend to be poorer. And research shows that children from poorer households are more likely to be fat. The programme is a glimpse of the old American dream: down-and-out teenagers are offered the chance of a career, good benefits, home loans and, if they serve 20 years, a lifetime pension. Mr Devey yearns to make his father—who lives in a halfway house and can barely walk be-

Dust your shoulders off, keep it moving

cause he is so overweight—a dependant on his future military health-care plan.

Though the army is facing a recruiting crunch, America's youth-obesity problem is not new. In 1960 John F. Kennedy wrote an article in *Sports Illustrated* warning the public about how unfit the nation's children had become. A Columbia-Presbyterian hospital study had shown that American children were far more likely than their European counterparts to fail a set of physical-strength tests. "Such softness on the part of individual citizens can help to strip and destroy the vitality of a nation," wrote the then president-elect.

Sixty-odd years later things are much worse. The childhood-obesity rate has quadrupled and many states have gutted physical-education requirements in public schools. According to one poll, nearly half of Americans put on unwanted weight in the year to February 2021—of those who did, the average gain was 29lb. Children, too, got heftier: the share of obese children and teenagers rose from 19% to 22%.

The course therefore won't fix the army's predicament. Schools and parents could do more to get children running around and eating properly long before a recruiter calls. For now, the army is meeting America in the middle. But the middle keeps expanding. ■

Polyamory

Disrupting the dyad

SOMERVILLE, MASSACHUSETTS

Polyamory is getting slivers of legal recognition in America

IT ALL BEGAN with Dungeons & Dragons. In a club for enthusiasts of the fantasy role-play game, Nate met Ashley and Erik, a married couple. Two years of friendship turned to romance and intimacy: first between Ashley and Nate, then him and Erik. They formed a triad. There was frank talk about commitment, finances and parenting—Ashley and Erik have two children, who now call Nate "bonus daddy". "There's a lot of love going on," he says, as the three adults cosy up on their couch.

In October they held a commitment ceremony resembling a wedding (pictured), albeit with more vows. ("We tried to keep them short," says Ashley.) The arrangement has no legal weight as a marriage: every state bans bigamy or polygamy. So they signed a "no-nup": a contract outlining alimony and child-care responsibilities in the event of a break-up or death among partners who were never legally married. Their lawyer, Diana Adams, notarised it with a "lovely stamp that goes ker-chunk".

Ashley, Erik and Nate are polyamorous, which falls under the umbrella of consensual non-monogamy (CNM)—the agreement to pursue one or more sexual or romantic partners. CNM also encompasses purely sexual liaisons without the love and commitment of polyamory, such as swinging and open relationships. One in 20 partnered people is in a CNM relationship while one in five has engaged in CNM at some point, according to surveys by Amy Moors of Chapman University and her colleagues. Gay people are much more likely to do so than straight ones. Congress's codification of same-sex marriage, stipulating that such unions must be between two people, "completely erases a lot of queer history", says Ms Moors.

Triads and quads are what Laura Boyle, a relationship coach, calls "poster-child polyamory": comprehensible to monogamous people who can grasp the concept of a closed unit living together. In fact networks are often more complicated, represented by V- and N-shaped configurations that don't imply mutual attraction among several people. Ms Boyle lives separately from her three partners; she co-parents with her ex and his wife. She calls polyamorous people "folks with a scheduling kink" and thinks they are more willing to accept some fluidity in their relationships, for which marriage is a poor framework.

Still, marriage confers tax, health-care and immigration benefits that polyamorous people would like to claim too. States and cities are granting slivers of legal recognition. In September a judge in New York City allowed the third partner of a deceased man to argue that he should inherit their rent-stabilised lease. A dozen states allow triple-parent custody of children.

In 2020 Somerville, outside Boston, became the first city in the country to offer multi-partner domestic partnerships, followed by nearby Arlington and Cambridge. Municipal employers must provide health insurance and other benefits to employees' partners. Private firms are under no such obligation—that requirement would have to come from the state. Sceptics worry about people claiming an outrageous number of partners. But denying rights on the presumption that people will act in bad faith is no way to operate, says Alexander Chen of Harvard Law School.

Polyamorous people report high levels of discrimination by employers and landlords; courts often treat them unfavourably in custody disputes. Advocates are pushing for ordinances banning discrimination on the basis of relationship status. Stigma indeed means many stay quiet. Survey respondents say polyamorous people are less likely to pay taxes or walk their dog. It is assumed that they feel less sexual satisfaction, less trust and more jealousy when the opposite is true.

Views are changing: in 2020 a fifth of Americans told Gallup that polygamy was morally acceptable, up fourfold since 2006. That reflects more media visibility and growing acceptance of non-traditional families. Millennials are most inclined towards non-monogamy: two in five prefer it, perhaps because the alternative does not pan out so well. In anonymised surveys, a fifth of people in monogamous relationships admit to cheating. ■

Science and politics

Red and blue science

WASHINGTON, DC

America's culture wars extend into medicine. Florida is exhibit A

Aside from public schools, another covid and culture-war casualty, no institution had a steeper fall in public confidence in 2021 than the medical establishment, according to Gallup, a pollster. In 2022 this downward trend continued: only Americans' confidence in the Supreme Court and the presidency fell faster. And politics is making matters worse.

The decline is not new. In 1966 seven in ten Americans said they had great confidence in "the people in charge of running medicine"; by 2012 just three in ten did. Whereas in 2018 public faith in the medical establishment was nearly identical in both camps, by 2021 it had split, rising to 46% among Democrats and falling to 32% among Republicans.(see chart 1).

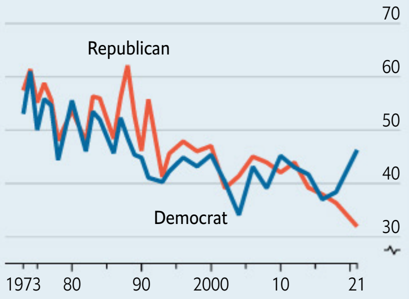
One politician who has tapped into these feelings is Ron DeSantis, Florida's Republican governor, who sprang to prominence during the pandemic by keeping his state open in the face of establishment pressure for lockdowns. He looks likely to run for president on an "anti-woke", "anti-migration" and "anti-mandates" platform. In December he all but added "anti-vax" to his list, requesting a grand-jury investigation into possible "crimes and wrongdoing committed against Floridians related to the covid-19 vaccine". He also promised that a Public Health Integrity Committee would scrutinise advice from the CDC, the Food and Drug Administration and the National Institutes of Health.

The state Supreme Court has since approved his request for a grand-jury probe. His state boards of medicine and osteopathy are soon expected formally to endorse guidance to ban transgender treatment for minors, a move seen by some as a political takeover of medical institutions. In his inaugural address on January 3rd the governor criticised states that "have imposed medical authoritarianism in the guise of pandemic mandates and restrictions that lack a scientific basis".

Jay Hmielowski at the University of Florida assumes Mr DeSantis is signalling to his base that: "Trump supported lockdowns, I opened the state. Trump supported vaccines, I questioned aspects of vaccines." He expects him to soften his position in the later stages of any presidential run, but adds that in this phase it makes political sense to signal a harder line. One feature of Mr DeSantis's approach is that, as part of his attack on mainstream scientists, he presents himself as a guardian of true science. His vaccine announcement was made at a 90-minute nerdy roundtable with selected scientists discussing several studies. It was hard to imagine Donald Trump sitting through it. But Mr DeSantis listened attentively, telling his audience: "I think people want the truth and I think people want accountability, so you need to have a thorough investigation into what's happened with these shots."

The colours of confidence 1

United States, respondents with a great deal of confidence in the people running medicine, %

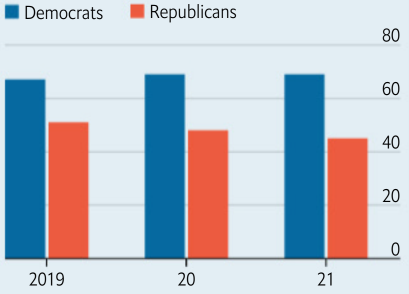


Source: NORC at the University of Chicago

That last criticism is not without grounds. Many countries struggled with imperfect decision-making between scientists and politicians during the early stages of covid-19. But whereas others mostly got through without seriously harming science's reputation, America did not. In the run-up to the 2020 presidential election, Democrats also politicised the issue of vaccines. In a televised debate Kamala Harris, now the vice-president, said that she would be vaccinated if public-health professionals recommended it, "but if Donald Trump tells us that we should take it, I'm not taking it." Efforts to stifle dissenting views on topics such as mask efficacy and school closures did not help.

Party shots 2

United States, adults saying they received a flu vaccine, %



Source: Harris-Grid polling

Few areas of medicine have become as politically heated, and in need of cool-headed research, as treatment of transgender children. Neither side seems to be engaging in good faith. Some Democrats have misrepresented the medical consensus on how best to help children with gender-related distress, presenting this as a closed matter when there is no global scientific consensus. The cherry-picking of evidence by medical bodies such as the American Academy of Paediatrics helps explain why Republicans have become twice as likely as Democrats to believe scientists have agendas beyond the pursuit of scientific fact.

Mr DeSantis's determination to ban transgender treatment for minors may partly be a reaction to a lack of scientific rigour on the issue by Democrats, and some of America's medical bodies. Several southern governors have sought similar bans, but most have been blocked in courts. By going through his state's board of medicine, Mr DeSantis not only ensures that the ban is more likely to get through but will also enable him to claim it is based in science. "Florida appears to be the focus group for now," warns Brandon Wolf from Equality Florida, an LGBTQ+ rights group, "If successful, I can guarantee you will see other states replicate it."

Science the following

Political opportunism, with both parties loving science where it suits them and spitting it out where it does not, is nothing new to James Cantor, a sex researcher who has seen "fair-weather friends" come and go. He has acted as an expert witness for Florida's government in several gender-care cases. He remembers how 20 years ago he was pitted against lesbians and feminists because he focused on the role of biology in explaining differences between the sexes, whereas they saw most differences as social constructs. "Well, here we are 20 years later and suddenly I'm their darling now the science, which hasn't changed, suits their argument [that sex differences are real]," he chuckles.

All this has real consequences. Republican voters are less likely to get a covid-19 booster. They have also become more hesitant about other vaccines, including flu shots (see chart 2). An outbreak of measles in Ohio in November and December seemed entirely caused by unvaccinated children. "We haven't had politicised epidemics before," says Robert Blendon, at Harvard University. "There were never Republican views of polio, or H1N1 or smallpox, and Democrat views." ■

Lexington | The real culture warriors

Rappers are strengthening Donald Trump's movement, and ensuring it will outlast him

Here is an unsettling bit of evidence of technological, cultural and racial progress in America: the town of Philadelphia, Mississippi, where in one of the most infamous crimes of that era the Ku Klux Klan killed three civil-rights workers in 1964, is now home to a black rapper helping create the propulsive soundtrack of Donald Trump's movement to "Make America Great Again".

Christopher Townsend, who raps under the name Topher, dislikes the label "MAGA rap" that Spotify and other platforms apply to his genre. He sees it as one more way the establishment tries to villainise artists like him and keep people from hearing their messages. When pressed he calls himself a Christian conservative rapper. Jesus, he notes with a chuckle, also "triggered some people".

Labels aside, Mr Townsend and rappers such as Forgiato Blow and Bryson Gray are the true culture warriors of the MAGA movement. By bringing rhyme, rhythm and the tropes of hip-hop to its messages of patriotism, gun rights, vaccine rejection, free speech and antipathy to abortion, they are churning out chart-topping singles and making MAGA seem edgy and subversive, the basic ingredients of cool. Their success is a sign that Mr Trump's politics will endure well beyond him.

Over lunch recently at Ronnie's Steak-N-Grill in Philadelphia, Mr Townsend pulled out his phone to play a rap he had just posted to Instagram opposing Kevin McCarthy as Speaker of the House. In the song, "Circus", which he later polished over the internet with his producer in Romania and posted to other platforms, Mr Townsend calls Mr McCarthy a sell-out and mocks Mr Trump's order that conservative opponents "knock it off":

> Sorry Trump, I know he's the guy you picked
> But we won't "knock it off" till he gets kicked
> It's always "play nice" then we get tricked
> It's so obvious—this time go eat a dick!

Mr Townsend says he still supports Mr Trump for president in 2024, but is confused by his temporising on Mr McCarthy, abortion and other matters. "So it's like, 'Bro, these are hard issues we was all, like, for you for. And now you're changing up?'" He says he might be drawn to Governor Ron DeSantis of Florida, if he runs. (In one blistering burst in his song "Devil Want Our Kids", Mr Townsend chains "DeSantis" with "chances", "advances", "campus" and "stances" to condemn teaching children about gender identity and sexual orientation.)

Mr Townsend, 31, served as a cryptological analyst in the Air Force before moving to Philadelphia with his wife, a teacher. He loves the 'Sip, as he calls his state; you could not pay him to move to "any of those Democrat-controlled cities". A fireplug of a man who raps—and eats lunch—in a MAGA-red knit cap, he can glower with the surliest of rappers. But his music can also be buoyant and empathetic and, in person, so is he. His influences range beyond Mr Trump to Booker T. Washington, Malcolm X and Eminem.

Mr Townsend grew up in the hamlet of Kilmichael, Mississippi. His mother taught him to be the man of the house by ten years old, he says, but she drank, and his father, married to another woman, was not much in his life. When he was 12 or 13 one of his mother's boyfriends hit her in the face with a two-by-four, and as she bled it took an hour for the police to respond. "I learned early on no one was coming to save me," he says. "And I think that's what fuels my ideology today. No government, nobody."

Mr Townsend's contempt for authority points to a reversal of cultural polarity under way in America. The left once drew energy from scorning authority and bourgeois convention. But as it becomes America's enforcer of social norms, it increasingly treats the arts as a tool for instruction. As a result it is surrendering what puts the arts in society's vanguard, the capacity to question and shock. What more transgressive act could an artist perform than to don a MAGA cap, as Kanye West did?

Mr Townsend dismisses accusations of anti-Semitism against Mr West and is offended by the music industry's uneven moral standards, given that some rappers use the N-word and celebrate drug-dealing or violence against women. "Why haven't they censored that?" he asks. "So they don't care about black people getting murdered? Or slurs getting thrown around about black people?"

The fire next time

Mr Townsend has no illusions that America is a post-racial society. But he thinks movements like Black Lives Matter ignore reality to foster black victimhood and that the Democratic Party has ill-served black Americans for generations, a theme of many of his songs. Joe Biden "put our people in the system", run the lyrics of "Twenty Twenty". "Mr Crime Bill Biden—is that your decision?"

Mr Townsend's biggest hit—"the life-changing song"—was "The Patriot", performed with a frequent collaborator, The Marine Rapper, who is also black. The song went to No. 3 in Billboard's rap chart in December 2020." "This is where we make a stand, no more give or take," raps Mr Townsend. "March around the capitol, storm the city gates." Those lyrics took on new weight after the two men performed the song near the Capitol on January 6th, and it vanished for a time from Spotify and other platforms (and subsequently surged to No. 1).

Mr Townsend says he learned of the attack after it happened and that he opposed the violence. "I don't think that was the time to do it," he says. "And I also don't think you should ever do something when you have no strategy." But he is not against overthrowing the government, and he fears the day is approaching when that might prove necessary. Republican leaders are thwarting the wishes of their voters, he argues, pointing to aid to Ukraine and the election of Mr McCarthy. Should the revolution come—"Lord forbid," Mr Townsend adds—do not be surprised if the rebels have rap lyrics on their lips. ■

Brazil

The storming of Congress

SÃO PAULO

A copycat insurrection and its troubling aftermath

THE INVASION of Brazil's presidential palace, Congress and Supreme Court lasted for three hours on January 8th. The damage to Brazilian democracy will last much longer.

Thousands of supporters of Jair Bolsonaro, the country's former president, broke into government buildings and demanded that their hero, a right-wing populist who lost an election last year, be reinstated. The insurrection occurred a week after the inauguration of Luiz Inácio Lula da Silva, the leftist who won that election.

Many, if not most, of Mr Bolsonaro's supporters believe, without evidence, that Lula cheated. Mr Bolsonaro has encouraged this lie. He refused to concede defeat. His party tried to get the result annulled. For the past two months his fans have camped outside military barracks, urging the armed forces to stage a coup.

When that failed, they took matters into their own hands; seemingly with little objection from police in Brasília, the capital. Despite days of warnings that *bolsonaristas* were plotting something, a security plan was apparently cast aside by Brasília's governor at the last minute. Few roads were blocked. No reinforcements were sent to the government buildings.

The insurrection echoed, and was inspired by, the storming of the United States Capitol by supporters of Donald Trump on January 6th 2021. In the Brazilian Senate rioters climbed onto a stage and slid down it as if they were in a playground. In the Supreme Court they ripped a door from a justice's quarters and hoisted it in the air like a trophy. Police eventually used tear-gas and pepper spray to disperse the rioters. Mr Bolsonaro, who has been in Florida since December, was slow to condemn the violence, tweeting that it "crossed a line" only after it was nearly over. On January 10th he posted a video to Facebook, a social-media site, which questioned the election result once more (the video was then deleted).

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41 Latin America's booming cities

Lula declared a federal intervention in Brasília, which puts security in the district under the direct control of his government until January 31st. Hundreds of people were arrested and many criminal investigations have been opened. Investigators will try to work out how the protests were planned. They will also want to know why the police did so little to prevent them, intervening only when the ransacking was well under way. Carlos Fico at the Federal University of Rio de Janeiro thinks that part of the explanation is that "the vast majority" of police officers sympathise with Mr Bolsonaro, a former army captain.

Mr Bolsonaro spent decades building a political base among cops and soldiers, fighting to increase their budgets and benefits. He excluded soldiers and military police from pension cuts in 2019, and pardoned police convicted of illegal killings. He also attempted to pass a law which would in effect have given the police immunity in such cases. By contrast Lula's hand-picked successor, Dilma Rousseff, sparked fury among the armed forces by launching a commission in 2011 to investigate crimes committed during Brazil's military dictatorship of 1964 to 1985, under which she was tortured.

Lula's government is unlikely to change cops' political preferences. But it can root out commanders and officers who are shown to have neglected their duty to protect, thus sending a message that cops must uphold the law impartially.

A federal prosecutor has opened an investigation into what he referred to as "complete inaction" by police commanders in Brasília. Similarly, Alexandre de Moraes, a Supreme Court justice loathed by *bolsonaristas*, suspended Ibaneis Rocha, the district's governor, for 90 days, accusing him of "omission and connivance". Mr Rocha had defended the right of *bolsonaristas* to what he called "uncensored political protest" and had ignored requests to increase security or block roads around the government buildings that were attacked.

Brazilians are not merely divided; polarisation has warped one side's view of reality. In an online poll conducted by Atlas Intelligence almost 40% of respondents said they believed Mr Bolsonaro had won the election. Although nearly 76% disapproved of the invasion of government buildings, 18% approved. And a terrifying 37% said they would support a military coup to overturn Lula's electoral victory. On the day of Lula's inauguration, many protesters camped outside army barracks worried that Brazil would soon become a communist dictatorship. "I don't want to see my son eating from rubbish bins," said Geisi Avila, clutching her two-year-old.

Lula is unlikely to win over Brazilians who believe such things. But he can try to restore calm. Chris Garman of Eurasia Group, a consultancy, thinks Lula will have to "walk a fine line" between toughness and restraint. He needs to show that insurrectionists and police who support them will be punished, but avoid playing into the narrative that *bolsonaristas* (and Christians and conservatives) are victims of persecution. On the night of the riots he called the rioters "Nazis" and "fascists", which was unwise and untrue. The next day he adopted more statesmanlike language.

A swell of political goodwill in the wake of the crisis may help Lula build the support he needs in Congress for a series of tricky economic reforms, such as a shake-up of taxes to boost growth. But whatever popularity boost he receives will probably be temporary. And having been reminded of Brazil's angry divisions and the lasting strength of *bolsonarismo*, the president may become more risk-averse. He has already extended wasteful fuel subsidies that were put in place by his predecessor, against his finance minister's advice.

Investors seem to be giving Lula the benefit of the doubt. The Brazilian real gained against the dollar just after the election, and dipped only slightly after the chaos in Brasília. But it would be a mistake for the government to retreat from reforms for fear of future protests. An economic crisis would only make unrest worse. ■

Peru

Sex pots

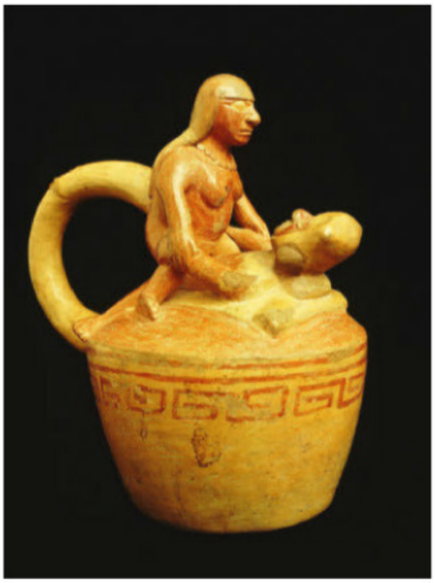
MOCHE VALLEY

Ancient erotic art challenges modern taboos

PERU IS socially conservative, especially when it comes to sex. It was, after all, the former seat of the Spanish empire in South America, which punished sodomy, masturbation and sex outside marriage with lashings and death. Today, gay couples cannot marry and women are allowed abortions only if their lives are at risk. Prissy parents have a veto over sex education in schools. Politicians embrace the status quo. Antauro Humala, a former convict who is now aspiring to run for president, uses a slur when referring to gay people.

For a reminder that Peru has not always been so uptight, look no further than the Moche valley in northern Peru. For the past decade, the foggy coastal region has been a sleepy hub for tourists visiting the Temples of the Sun and the Moon, vast adobe monuments used as ceremonial sites by the Moche people, a pre-Colombian civilisation that lived on the coast between the second and eighth centuries. Over the past year, however, the main tourist attraction is at a roadside park with a carnivalesque atmosphere. There, as reggaeton blasts through a loudspeaker, tourists line up to take a selfie with a giant fibreglass statue of a Moche man gripping his enormous phallus, his other hand raised in a fist.

The statue, unveiled at the start of 2022, pays homage to Moche "sex pots". These are ceramic vessels that depict engorged genitalia and a variety of sex acts, from fellatio and anal sex to otherwordly copulation with skeletons, deities and animals.


A loving cup

Several hundred Moche sex pots survive today, offering a glimpse of non-Western attitudes to sex that once led Alfred Kinsey, a sexologist, to collect them. Though scholarly speculation about what the pots meant has varied over time, today they are thought to have symbolised the sacred flow of life-giving liquids for a society that flourished by irrigating desert valleys and harvesting fish from the sea, long before the rise of the Inca empire.

Branded "the erotic statue of fertility" by municipal authorities, the homage to the Moche sex pot provoked outrage among prudes and was burned down soon after it was installed. (It is unclear who was to blame; no case has been opened.) But the mayor of Moche, César Arturo Fernández, was undeterred. He commissioned two more and eventually added half a dozen other sex-pot-themed statues, featuring group masturbation, threesomes and gay sex. At first all this was dismissed by many Peruvians as a political stunt. But now the original statue has turned into a national sensation, inspiring memes and imitations worn at discos and weddings.

On a recent Saturday, tourists struck daring poses under the main statue's towering phallus. Shy giggles gave way to shrieks. Some embrace the member. Others pretend to kiss or lick it, or bow to it in a sign of worship. The other statues invite similar play: mothers place their children inside a cave-like vagina to re-enact their birth. A man caresses the testicles of one of the statues of a gay couple, as his boyfriend takes a photo. "We've taken a lot of selfies," he says. "It's our anniversary." Irma Liñan, a 64-year-old widow on holiday with friends, says she will tell her whole family to visit.

Not everyone is pleased. On January 4th Milagros Jáuregui de Aguayo, a conservative lawmaker, proposed a law to forbid erotic artwork from being displayed in public spaces. But Ulla Holmquist, the director of the Larco museum in Lima, where a collection of Moche pots are kept in a discreet gallery, says that whatever the initial political motives for creating the site, it has provided a rare opportunity to discuss taboos. And late last year Mr Fernández was elected mayor of the much larger municipality of Trujillo. Who says Peruvians don't want to talk about sex? ■

Cities in Latin America

Barrios and baristas

BUENOS AIRES AND MEXICO CITY

Latin American cities are becoming far nicer for poorer inhabitants

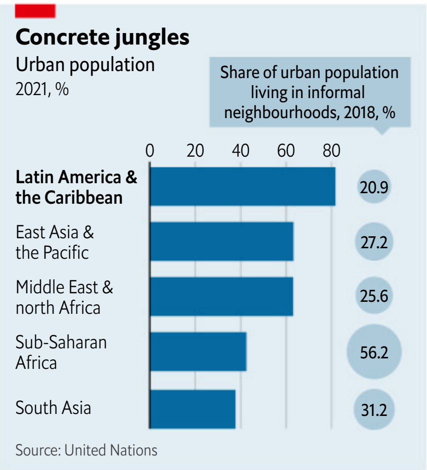
IT IS HARD not to bump into a hipster in La Condesa or Roma Norte, two trendy districts in Mexico City. The areas are abuzz with cafés, shops bursting with vintage clothes, and parks pullulating with "digital nomads" who upped sticks during the pandemic and moved there from the United States. Inevitably, locals grumble about gentrification, rising rents and *yanquis* speaking English. Yet these two districts exemplify a broader trend: Latin American cities are much nicer than they used to be.

Fully 81% of Latin Americans live in cities. It is the world's most urbanised region. Rural people flocked to the cities in huge numbers from the 1950s onwards, seeking better jobs, schools and health care. Many moved to a few big hubs. Urban planners could not keep pace. Housing was often unaffordable to newcomers. Instead, many built their own homes on the outskirts of towns. Between 2000 and 2010, Rio de Janeiro's formal population grew by only 3.4%, but that of its *favelas* grew by 27%. A fifth of the region's inhabitants live in informal neighbourhoods (see chart).

Partly as a result, by the 1990s Latin American cities had a bad reputation. But today many are transformed. São Paulo in Brazil, Buenos Aires in Argentina and Santiago in Chile all boast lower murder rates than Miami (which suffers 12.8 homicides per 100,000 people each year).

What is striking is that most of the improvements are in the poor, unplanned settlements. Take Iztapalapa, a municipality of around 2m people in the east of Mexico City. Clara Brugada, the area's mayor, claims that when she came to power at the end of 2018 the neighbourhood had been "abandoned". Out of 2,454 municipalities it ranked in the top ten for violence. There was no street lighting. But now many main streets are well-lit. Since then, crime has declined. The murder rate in the municipality fell from a high of 19 per 100,000 people in 2019 to 12 in 2021. This is much lower than the country as a whole, which has a whopping 28 murders per 100,000 people each year.

Ms Brugada is not the only politician making her mark. In the past two decades, a series of mayors have integrated slums into main cities. They have improved transport networks, roads and public plazas. They have built parks. By 2014 Medellín, for decades the drug capital of Colombia, had opened up four square metres of public space per resident, including public libraries, science museums and a botanical garden. In 2022 the government of Iztapalapa built dozens of green spaces and turned cul-de-sacs into playgrounds.



Concrete jungles

Urban population

2021, %

Source: United Nations

Federal laws have helped. In 2001 Brazil passed one which meant that rather than eliminate slums, politicians were expected to work with their inhabitants. But the biggest driver of change is that many of these mayors have more powers than those elsewhere. The government of Buenos Aires controls education and has its own police force. It can also raise its own taxes, including stamp duty, property and income taxes. That is significantly more fiscal power than the mayor of London, though slightly fewer powers than the mayor of New York. In Medellín Sergio Fajardo, a centrist mayor from 2004 to 2007, allowed residents to choose how 5% of the municipal budget would be spent in their area. During his term, Mr Fajardo dedicated a whopping 40% of the city's budget to education.

Lifting up slums

The spur for innovation partly comes from the fact that Latin American mayors are directly elected, rather than appointed by the federal government. Often they want to run for national office, and so are keen to make a good impression. Claudia Sheinbaum, the mayor of Mexico City, is the favourite to become president in 2024. Mauricio Macri, mayor of Buenos Aires from 2007 to 2015, went on to become president. His successor, Horacio Rodríguez Larreta, is the frontrunner to be president in Argentina's general elections in October.

Latin America's city governments have also found clever ways to fund their projects, says Anacláudia Rossbach of the Lincoln Institute, an American think-tank. Cities in federal systems such as Mexico, Argentina and Brazil are often cash-strapped because they depend on transfers from the central government to fund infrastructure, and they often give more money than they receive. Colombian cities use "betterment levies": residents whose property will appreciate in value when a road is built must pay an extra tax to fund it, and this applies to other public infrastructure, too. Many mayors also strike up public-private partnerships or apply for loans from international institutions.

Still, there is much work to be done. Crime remains high in many cities. In Mexico City the murder rate has fallen but extortion has risen, making it hard for people to start businesses. Many mayors worry that as climate change worsens, it will drive ever more migrants into the precarious outskirts of towns. Children across Latin America do worse in school than those in most other regions. And inflation squeezes budgets.

But like the hipsters and slum-dwellers, other mayors are taking note of Latin America's progress. Late last year Buenos Aires hosted the C40 summit, which brought together mayors of 97 of the world's biggest cities. Not far from the posh conference centre, Lis Miguel, a 49-year-old cook who once lived under a noisy highway in Villa 31, a notorious slum, opened the windows of her new home, built last year by the city government with help from the World Bank and Inter-American Development Bank. When she first arrived in the slum a decade ago, she told herself: "The first chance I get I will get out of here." Now, she says, beckoning to her living room and open-plan kitchen, "I am here in my own peace." ■

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Nigeria

Buhari's dismal legacy

ABUJA AND KANO

Will Nigeria's next president avoid the errors of the outgoing one?

“Buhari has given us very big *wahala* (trouble),” says Usama Sani, a student in Kano, the biggest city in northern Nigeria. “There is insecurity and unemployment,” he complains, before shouting: “We are going to kick Buhari aside!” President Muhammadu Buhari used to be popular in Kano; he won landslide support there in two presidential elections. Now, says another student, Umar Garba Umar, “we are so hungry for change.” Even members of Mr Buhari's own All Progressives Congress (APC) are down on the outgoing president. Kashim Shettima, the APC's vice-presidential candidate, concedes that Mr Buhari has done only “modestly well”.

When Mr Buhari was first elected, in 2015, many hoped Nigeria was about to turn a corner. This newspaper cautiously endorsed him. Yet he has floundered on almost every measure. Between 2015 and 2020 the average income per person (adjusted for purchasing power) slid from $5,400 to $4,900 a year. The share of Nigerians living on less than $1.90 a day, which had fallen from about 43% to 37% in the previous five years, increased to almost 40% in 2019, before covid-19 hit.

Violence has spread. Last year jihadists, bandits and separatists hit at least 550 of the country's 774 local government areas (see map on next page). More than 3,000 people were kidnapped last year, an almost 30-fold increase on 2016. Many were children. And a wave of attacks on electoral offices could lead to a delay of the general election, scheduled for February 25th.

Not all of this was Mr Buhari's fault. The price of oil, Nigeria's only big export, plunged just as he took office, kneecapping the budget. The state he took charge of was weak and corrupt. The taxes it raised (not counting oil royalties) were a paltry 5% of GDP. Covid buffeted Nigeria during his second term, and the war in Ukraine added to food-price inflation.

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Even so, Mr Buhari has failed to impress. He is indecisive: he took 166 days to swear in his first cabinet. He is reluctant to delegate, but often unavailable to make decisions himself because his health is poor. He has spent more than 200 days in Britain, primarily for medical treatment, leaving his government paralysed.

His administration has failed to co-ordinate its decisions, or to execute them competently. To get things done, a Nigerian president has “to be a coach and a referee at the same time”, says Amaka Anku of Eurasia Group, a consultancy. Failing to co-ordinate, manage and strike deals is Mr Buhari's biggest failing, she says.

Though perhaps this was a mercy: many of his economic decisions have made things worse. A former general (and military ruler in the 1980s), he likes to give orders. But markets tend not to obey them. After oil prices plunged in 2014-15 he should have let the currency weaken. Instead he tried to prop it up by banning many imports, from toothpicks to sardines. Investors fled; factories closed. In 2019 he closed Nigeria's land borders to imported goods, hoping to stimulate local production. Instead, he spurred inflation. Those bits of the economy that have flourished—information technology, music and film-making, all relying on Nigerian talent—have done so mainly by staying away from the state.

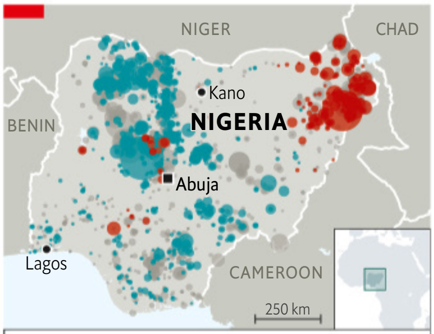
Mr Buhari has not provided the unifying leadership Nigeria needs to ease the (sometimes violent) rifts between its many ethnic groups and faiths. He rarely speaks in public, creating a vacuum that more extreme voices fill. Separatist movements have grown. Clashes between farmers and herders have become more deadly.

At times Mr Buhari has stoked division. After winning his first term in 2015, he said that places where he won only 5% of the vote could not expect the same treatment as those that gave him 97%. In 2021 he reminded separatists in the south-east of Nigeria's civil war in the late 1960s, in which perhaps 1m people died. If they kept on "misbehaving" they would be dealt with in "the language they understand", he said.

His government appears reluctant to acknowledge mistakes. It insists it has improved security. In reality, the main jihadist group, Boko Haram, was suffering big reverses when he took over, which continued for a while. But then other groups started causing mayhem across far more of the country. Last year about 10,000 people were killed by jihadists, kidnappers, bandits or the army (see chart). This is comparable to the worst years of the Boko Haram insurgency in 2014-15.

In December Reuters, a news agency, alleged that the Nigerian army ran a forced-abortion programme in the north-east, ending the pregnancies of at least 10,000 women who were thought to have been made pregnant by jihadists, often in rapes. Reuters suggested the motive was a baseless belief that the children of insurgents would inevitably become insurgents too, so it was better to destroy them before they were born. The army accused Reuters of "demonic journalism".

Governments that minimise or deny problems tend not to solve them. Incompetent officials are seldom held to account, laments Idayat Hassan of the Centre for Democracy and Development, a think-tank in Abuja. In eight years, Mr Buhari has sacked just three ministers. "As long as you are seen as personally loyal to him, it doesn't matter how poor your performance is," says Cheta Nwanze of SBM Intelligence, a consultancy in Lagos.



People killed in conflict, 2022

By group involved

- ● Jihadist
- ● Ethnic or communal militia
- ● Other

Deaths* ● 10 ● 100 ● 250

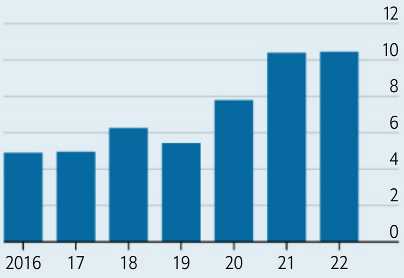
*Including government forces, militants and civilians

Source: ACLED

A lamentable record

Nigeria, number of people killed in conflict*

'000



*Includes government forces, militants and civilians

Sources: ACLED; José Luengo-Cabrera

His administration can point to some achievements. It has worked with the legislature to pass much-needed electoral reforms and an overhaul of the oil-and-gas sector. And it has completed major rail and road projects that have been in the works for decades (though it has struggled to keep travellers using them safe).

Pity the victor

Surveys suggest that Nigerians are keen to have younger, more energetic and more communicative leadership. Peter Obi, a third-party candidate who fits this description, tops many polls and was recently endorsed by Olusegun Obasanjo, an influential former president.

Many pundits still expect the eventual victor to be Bola Tinubu, the APC's candidate. His campaign has deep pockets, and the ruling party holds many state-governor offices, making it easier to prod and pay people to vote for its candidate. Like Mr Buhari, Mr Tinubu is old (70) and dogged by rumours of infirmity. He has struggled to articulate a vision. His supporters note that he had a good record as the governor of Lagos between 1999 and 2007, increasing the state's tax take nearly sixfold.

The stakes are high. "There is a lot of anger," says Osita Chidoka, a former minister in the opposition People's Democratic Party. "People are going to vote and are going to express that anger." Maybe so, but Mr Tinubu has no official role in Mr Buhari's government, so he may be able to distance himself from it in voters' eyes while still enjoying the muscle of the ruling party. "Sadly" for the opposition, says Mr Chidoka, "Buhari is not on the ballot." ■

Ethiopia

A fragile peace

UM RAKUBA

The fighting has stopped, but deep faultlines remain

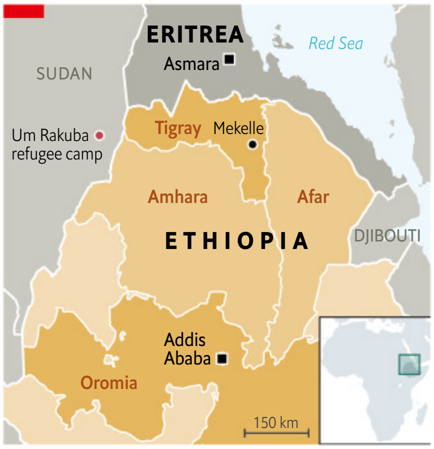
INSIDE HIS makeshift hut, Fisseha Gebreselassie contemplates all he has lost. Days after Ethiopia's civil war began in November 2020, Ethiopian soldiers killed his 12-year-old son in front of him. Fearing for his life, he fled Tigray, the northern region at the centre of the fighting, for Sudan, leaving behind his wife and three remaining children, hoping they would be safe. But militiamen from the neighbouring Amhara region soon seized their home, forced them onto a truck and drove them across the river to central Tigray.

More than two years later, the family is still separated. A peace deal signed in November has raised hopes that Fisseha and thousands like him might be able to go home. It has stopped both the fighting and a blockade of Tigray by federal forces that led to probably hundreds of thousands of deaths from bombs, bullets or war-induced famine and disease. By resetting relations between the two main belligerents—Ethiopia's government and the Tigrayan People's Liberation Front (TPLF)—the deal is also reshaping alliances inside Ethiopia and perhaps the wider region.

This rapprochement seemed fanciful just months ago. Leaders from the TPLF and the government smile while posing for photographs. Food and medicine are being delivered to starving civilians. Internet and phone networks to Tigray that have been cut for much of the war are being partially switched back on. For the first time in two years, Fisseha can call his wife.

But it is a fragile and uncertain peace. That much is evident in the Um Rakuba refugee camp in eastern Sudan, which shelters some 16,000 Tigrayans. Most are from the contested area known officially as Western Tigray. Refugees there say they cannot return home because their land is occupied by Amhara militias and settlers, or by soldiers from Eritrea, who fought alongside the Ethiopian government and are implicated in some of the war's worst atrocities. "If there is peace, why are Eritreans still on our land?" asks Fisseha.

The peace agreement did not explicitly make any mention Eritrea, which was part of Ethiopia until seceding in 1993. A subsequent "road map" drawn up by military commanders says the demobilisation of Tigray's forces should take place alongside "the withdrawal of foreign and non-ENDF [federal Ethiopian] forces", suggesting Eritrean and Amhara troops would leave.



That has not happened. Eritrean troops are still in Tigray, albeit in smaller numbers, where they have continued to loot towns and rape and murder civilians. Western Tigray, as well as disputed territory in the south of Tigray, remains occupied by forces from Amhara. The TPLF is handing over its heavy weaponry, but it still has armed men. Tigrayan military sources in eastern Sudan, for instance, say they still have some 20,000 fighters at the border.

At the heart of the problem lies Ethiopia's troubled relationship with Eritrea, with which it fought a war between 1998 and 2000. In 2018 Abiy Ahmed, Ethiopia's prime minister, struck a peace deal with Issaias Afwerki, Eritrea's dictator, ending hostilities that had lasted nearly two decades. But that deal offered Issaias a chance to settle old scores with the TPLF, which was in charge when Ethiopia defeated his forces in the border war. He is thought to have egged Abiy on when he first sidelined the TPLF and then sent his army into Tigray to crush it. Eritrean troops crossed into Tigray almost immediately.

Since Issaias is not a signatory to the latest peace agreement, he may not feel bound by its terms. Even if he eventually pulls his troops out, he may still find ways to stir up trouble to weaken the TPLF—and possibly Ethiopia, too, if he thinks it has gone soft on his main foe. Eritrea is supporting Tigrayans opposed to the TPLF, in some cases through forced recruitment. In Um Rakuba a group of young Tigrayan men said they were abducted and taken to Eritrea for compulsory military training. They later managed to escape to Sudan.

Also present in Sudan are smaller rebel groups that are not party to the peace deal. Some are linked to minor Ethiopian ethnic groups. But one, the Oromo Liberation Army (OLA), says it is fighting for the self-determination of Ethiopia's largest ethnic group (see map). The OLA is a major headache for Abiy, who is himself Oromo. He has recently stepped up military operations against it, including launching drone strikes that have killed large numbers of civilians. If the war in Oromia escalates further, the OLA might seek support from Issaias, an old ally: Eritrea hosted it and several other Ethiopian rebel groups before the peace deal in 2018.

How Abiy will respond should Eritrea sabotage the peace in Tigray is hard to predict. Under the deal the federal army is responsible for protecting Ethiopia's sovereignty. By that logic, Abiy may eventually feel compelled to use force to kick the Eritrean troops out if they do not leave. Some Ethiopians speculate he might even join forces with the TPLF to do this; such a dramatic "reconfiguration of alliances" is not implausible, suggests an Oromo opposition leader. But Abiy's relationship with Issaias, though surely strained, may not break down yet. Allowing Eritrean troops to remain inside Ethiopia could be the price he decides to pay in order to avoid a showdown with Issaias. It may also keep the TPLF on the back foot. ■

Kenya

There will be blood

NAIROBI

A blood shortage and the kicking of an aid addiction

TRAGEDY LED Mariam Mwinyiusi to open a vein. Last year her friend died when she could not get a blood transfusion in time. "I can prevent it from happening to another person," she says at a blood bank in Nairobi, Kenya's capital.

Blood shortages have been a huge problem in Kenya—and many other parts of sub-Saharan Africa—for years. The cost is untold suffering, mainly of mothers and children. Researchers at Imperial College in London found that almost 52% of children in three east African countries admitted to hospital with severe anaemia died if they did not receive blood transfusions within eight hours. By contrast, 96% of those who got blood promptly survived.

Don't look

Other studies found that 26% of women who died in childbirth in sub-Saharan Africa could have been saved, had blood been available. The World Health Organisation estimates that 65,000 pregnant women in sub-Saharan Africa die every year from blood loss. Kenya's government reckons that 35% of maternal deaths in 2020 were linked to blood shortages.

There are several reasons why Kenya has so little bottled blood. Until recently the government spent little on blood drives to attract donors, who tended to show up only when a friend or relative needed a pint. Many worry that if they give to the bank, they could then be left dry, should a relative need a top-up.

Yet before 2020 most of the funding for Kenya's blood service came from America through the President's Emergency Plan for AIDS Relief (PEPFAR). This focused mainly on ensuring that blood was tested to curb the spread of infections such as HIV, rather than on promoting donations.

In 2019 America stopped writing cheques as part of a long-running programme to wean African countries off their dependence on aid for their blood services. It had successfully done so in countries including Ethiopia and Tanzania, where governments picked up the full tab for their blood banks between 2014 and 2016. But in Kenya the government's share of spending on transfusion centres declined.

Money problems were exacerbated when covid-19 struck in 2020. With schools closed, blood drives cancelled and people urged to avoid mixing, donations slumped. Between July 2019 and June 2020 Kenya's transfusion centres collected just 164,000 units, against an estimated need of 470,000-1m units. Yet the crisis also brought an emergency infusion of cash from the World Bank. Of $50m in concessional money allocated to help Kenya battle covid, $10m was earmarked for improving its blood-transfusion infrastructure, including 15 new blood banks (taking the total to 45) and frequent blood drives. It is paying off. In the 12 months to June 2022, Kenya collected 348,000 units of blood.

However, Kenya's reliance on concessional funding still leaves its blood banks in a precarious position: another sudden cut could once again leave Kenya anaemic, though with luck new blood donors such as Ms Mwinyiusi will become regular givers. "The good thing about donating blood," she says, "is that we are helping reduce the number of people suffering from high to low." ■

Iran

The rope tightens

Protests have subsided but Iran's clerics cannot yet proclaim victory

IRAN'S SUPREME LEADER, Ayatollah Ali Khamenei, may be sighing with relief. After the death in September of Mahsa Amini, a young woman arrested for not wearing a "proper" headscarf, the country saw daily protests, many led by women. Four months on, the cries of "Women, life, freedom" have all but petered out. University campuses, where demonstrations continued longest, resemble citadels, policed by security guards and cameras. Banners praising the Islamic Republic abound. And yet Iranians are still seething.

The regime has sentenced over a hundred protesters to death after cursory trials for the all-encompassing crime of "corruption on Earth". Four have been hanged. It has locked up nearly 20,000 people, including top footballers, film stars, journalists and students. Digital communication is more restricted than ever. "Ever more people are disappointed and getting back to their lives," says one Iranian journalist.

Mr Khamenei was slow to respond to the protests at first, but the 83-year-old cancer survivor now looks energised. He gives regular sermons to the faithful, addressing vast gatherings of women swathed in black chadors one day, and turbaned clerics the next. The rioters are "treasonous", he thunders, dangling the threat of execution over anyone questioning his rule.

His opponents, by contrast, have mostly fallen quiet. The slogans formed of rhyming couplets are no longer heard. Their graffiti have been painted over. After previous crackdowns, Iranians vowed to stay put. Now many are planning to leave.

Mr Khamenei would, however, be wrong to conclude that he has won. Iranians are still defiant. "Be off or I'll take off my trousers, too," an elderly woman was recently heard shouting at police who demanded she put on a headscarf in a women-only carriage on Tehran's metro. Segregation by sex is back in university canteens, so male and female students eat packed lunches together outside.

Nor have the protests died away entirely. The commemoration of a passenger jet accidentally shot down by the regime in 2020 reignited them for the first time in a month. On January 9th hundreds marched on a prison in Karaj, near Tehran, where two more protesters were to be hanged. "I will kill the killer of my brother," they chanted as security forces fired on them. The executions have yet to take place.

Mr Khamenei may also worry about divisions among his allies. Some, including stalwarts with ties to the Islamic Revolutionary Guard Corps, the regime's praetorian guard, have called for more compromise with protesters and a relaxation of the requirement for women to wear the veil. Former presidents have cautioned against responding to the unrest with an iron fist. On the streets, police look nervy. "I felt the fear in his eyes," says one driver, who confronted a policeman. "It's as if he was tormented by choosing between his duty to his leader and his country."

Worse still for Mr Khamenei, his state is a mess. Organised strikes have subsided. But Iranians wanting to travel around the country struggle to find tickets for planes, trains and buses. The rial has lost 50% of its value against the dollar since August 2021. As inflation spirals, many are turning to barter. On smartphone apps you can get a formal shirt in exchange for some chicken. For now, the regime continues to subsidise petrol prices at the rial rate, meaning a litre costs the equivalent of five American cents. But given biting sanctions few expect that to last. Hikes in petrol prices have sparked unrest before. When the next one comes, Mr Khamenei may find it harder to tamp down his people's anger. ■

Oil and water

Double bubble

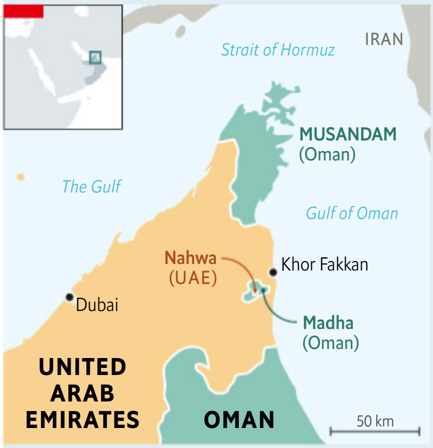
MADHA AND NAHWA

A century-old choice created one of the Gulf's oddest geopolitical features

THE BUSIEST petrol station in the United Arab Emirates (UAE), one local jokes, is not in the UAE. Head south from Khor Fakkan, a town on the country's east coast, and a right turn takes you across a near-invisible border (see map). There are no police posts or customs checks, only a small sign welcoming you to Oman—and queues at the filling station, where a litre of petrol goes for 62 cents. Across the street, and across the border, it costs 18% more.

The villages of Nahwa and Madha are a geopolitical oddity: an enclave of the UAE within an enclave of Oman within the UAE. On a map they look a bit like a fried egg, with Nahwa as the yolk. Only a handful of these double enclaves exist in the world. There is a complicated one on the border between Belgium and the Netherlands. Bangladesh and India had them until 2015.

The story begins a century ago, when this corner of the Arabian peninsula was known as the Trucial States, a collection of sheikhdoms administered by Britain. Four clans were vying for control of Musandam, a rocky headland that juts into the Strait of Hormuz. In the 1930s—or perhaps the 1940s, no one is quite sure—they sent emissaries to secure pledges of allegiance from nearby villagers. Those in Nahwa sided with the Qassemis, a powerful clan on the west coast.



Their neighbours in Madha, who were, then, well-off, chose differently. Oil had yet to be discovered; water was a more valuable commodity. The Madhawis had plenty of it, and other clans had fought over it. They thought the sultan of Oman would protect their well.

History has a sense of irony. Siding with Oman was logical back then. It had been an empire, while the Qassemis, jokes an old-timer in Madha, had a reputation as pirates. But the Qassemis went on to join the UAE; today their descendants rule two of its seven emirates. Buoyed by the world's eighth-largest oil reserves, Emiratis now enjoy the second-highest GDP per person in the Middle East. Oman is much poorer.

The fortunes of the two enclaves have diverged. Villagers in Nahwa moved in the 1990s to a new town with a clinic and a school. There are farms, date-palm groves and a hanging garden. Madha feels like it has not changed in decades.

There is idle talk of turning it into a tourist attraction: the enclave boasts spectacular hiking trails. When your correspondent visited, the day after a heavy winter rain, the roads were full of cars from elsewhere in the UAE, families and friends come to picnic in newly filled streams. Almost a century later, water is still the valley's main draw—although today, no one is fighting over it.

The Arab media

Hard to believe

ABU DHABI AND LONDON

The Arab world's rulers have turned journalists into courtiers

In much of the world the closure of independent media triggers an uproar. Not in Algeria. Only a handful of reporters attended a press conference on January 7th called by the lawyers of Ihsane el-Kadi, a journalist, after he was arrested and the radio station and website he owned were closed. Goons confiscated his journalists' mobile phones and computers. "People are too shocked and scared by the arrest to publish it," says Tin Hinane, his daughter, a respected Algerian analyst. "Algeria's media have all been co-opted by the state or forced to shut down."

This was not always so. For decades Arab rulers put up with an independent press of sorts. Some saw it as a safety-valve and a way to gauge public opinion. They kept a tight grip on journalists but did not dictate coverage. "We wrote about corrupt arms deals, local support for jihadists and the suppression of women's rights," recalls a nostalgic Saudi journalist of the 1990s.

No longer. Eight of the 15 worst abusers of press freedom are in the Middle East, says Reporters Without Borders, an international watchdog, up from five 20 years ago. The despots who swept back the Arab spring of 2011 have reduced journalists to mere mouthpieces. In 2019 most of Egypt's main newspapers printed the same 42-line obituary for Muhammad al-Morsi, its deposed president. "An intelligence officer oversees your work, so you just have to adjust and write about the leader's great projects—his bridges and roads," laments a seasoned Egyptian journalist.

Increasingly for Arab regimes, the only permissible news is good news. Last summer the United Arab Emirates (UAE) closed a local newspaper, *Al Roeya*, and sacked its editor and dozens of journalists, after it reported on cheaper petrol prices in Oman. "If you are working in a government institution you have to toe the institution's line," explained an official. Regimes also buy up advertising agencies so that wayward newspapers can instantly be deprived of revenue. As funds dry up, governments or their friends snap up independent outlets—or let them fold.

Some governments have brought in laws banning news deemed to disturb social stability. Journalists can be hounded with software such as Pegasus, an Israeli-made system which snoops on smartphones. Many are simply being locked up. Egypt is the world's third-largest jailer of journalists. The killing in 2018 of Jamal Khashoggi, a Saudi journalist, scared many into silence, reckons the Committee to Protect Journalists, an NGO in New York.

Today three Gulf states—Qatar, Saudi Arabia and the UAE—dominate the pan-Arab market. Lebanon, whose capital, Beirut, was once the media hub of the Arab world, still hosts the leading Shia stations. But it is too broke to invest in big outlets.

Foreign broadcasters used to offer an alternative. When Egypt announced during the 1967 Arab-Israeli war that Israeli warplanes were falling from the sky like flies, the BBC reported that Israel's forces were advancing on all fronts. But in September the BBC said it was ending 84 years of transmission by its Arabic radio service and cutting many of its staff. "The BBC is being neutered," says Hugh Miles, author of a book on Arab media. "It's become very frightened of tackling Gulf regimes."

Other Western-owned outlets, such as Bloomberg and Sky News, are arranging partnerships with Gulf regimes; these may limit their reporting. Regimes stymie foreign reporting by expelling journalists, restricting visas and blocking news sites.

For over a century Arab journalists sought refuge in the West when things became too bad at home. After civil war swept Lebanon in the 1970s, London became the Arab world's media capital. But there are signs that Arab governments may be hauling their London-based media home, the better to control them. *Al Arab*, a newspaper, and Al Ghad, a satellite TV channel, both Emirati-financed, have recently retreated from London. In August Al-Araby Al-Jadeed, a Qatari-owned satellite channel, moved its headquarters from London to Doha, Qatar's capital. "Hires in most of the Arab world would have to do what you tell them to," says Abdulrahman ElShayyal, until recently the channel's boss. "Editors behave like government ministers."

Under greater surveillance, standards slip. Demoralised editors copy and paste press releases as news. TV presenters are so nervous of departing from the official text messages received during broadcasts that they sometimes include "brought to you by Samsung" in their bulletins. The numbers in prison have declined a bit; in 2021 there were 72 detained journalists in the Arab world, just 25% of the global total, down from 32% in 2020. But that is only because their reporting has become less critical.

Circulation and audience figures are treated as state secrets, so it is unclear whether ratings have slumped as programmes become more anodyne. But it is a fair bet. "Arabs are deserting the mainstream media," says Abdel Bari Atwan, a Palestinian journalist in London. In a survey of Arab youth in 2019 by Asda'a, a UAE-based pollster, 80% favoured social media for their news, up from 25% in 2015.

Governments are delighted that their citizens seem keener on dramas and sport than current affairs. Saudi Arabia and Qatar have invested heavily in sports. The Saudi-owned MBC Group, the Arab world's largest media provider, shows multiple TV soap operas simultaneously. Still, Arab rulers may yet regret silencing the fourth estate, predicts Abdelaziz Alkhamis, a Saudi journalist. "If you can't alert leaders to the anger and problems in society, another Arab spring might surprise them again." ■

Read it and weep

Japanese energy

Land of the riven atom

ONAGAWA AND TOKYO

Japan re-embraces nuclear power—but risks underplaying renewables

FROM THE grounds of Onagawa Nuclear Power Station, a plant in northern Japan, waves can be heard lapping at the nearby shore. They serve as a reminder of the tragedy that struck on March 11th 2011, when a giant earthquake triggered a massive tsunami that flooded Japan's eastern coast. While the Onagawa reactors managed to shut down safely, the Fukushima Daiichi plant, 180km down the coast, suffered a meltdown. After the disaster Japan shuttered all of its nuclear reactors. Since then only a handful have been turned back on. Onagawa is among the nuclear plants that remain idle.

This will soon change. Onagawa recently received a safety sign-off from the new independent regulator set up in the wake of the disaster, thanks in part to the facility's new 29-metre-high seawall. In 2020 local officials also gave their approval to a restart. Tohoku Electric, the plant's operator, could begin generating power again by early next year (after finishing some repairs). "Recently, the electricity crunch and rising resource costs have made people across Japan think," says Suda Yoshiaki, Onagawa's mayor. "Is there any other way to supply large amounts of energy in a stable manner? There is no alternative...In terms of the big picture, nuclear power is needed."

Restarting reactors such as those at Onagawa is the first step of another drastic reversal in the energy policy of the world's third-largest economy and fifth-largest carbon emitter. In December Kishida Fumio, Japan's prime minister, codified a new ten-year road map for Japan's "GX", or "Green Transformation", which includes measures to revive the nuclear industry, strengthen the country's grid and begin introducing carbon pricing. Terazawa Tatsuya, chairman of the Institute of Energy Economics Japan, a think-tank in Tokyo, argues that Japan is finally "putting meat on the bones" of a pledge made by Mr Kishida's predecessor, Suga Yoshihide, to make the country carbon neutral by 2050. It is a delicate task, which requires striking a fine balance between safety, energy security and environmental concerns.

As an island nation with scant natural resources, Japan has long been in a precarious position when it comes to energy. Heavy dependence on Middle Eastern oil fuelled Japan's rapid economic growth after the second world war, then backfired during the oil crisis of 1973-74. That spurred Japan to expand its nuclear fleet, develop liquefied natural gas (LNG) and make forays into renewable technologies under the banner of the "Sunshine Project". By 2010 nuclear had emerged as the core of Japanese energy policy, with 54 reactors providing about 25% of electricity production; the government aimed to expand the share of nuclear and hydropower to 70% by 2030. The Fukushima crisis scuppered those plans. New laws were instead passed to help stimulate solar power. The share of renewables in electricity generation doubled from 10% in 2010 to over 20% last year. Yet Japan has mainly filled the gap by turning to LNG and coal (see chart on next page).

The war in Ukraine has revived memories of the first oil crisis, with Japan again finding itself heavily dependent on im-

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ported fuel in an unstable world. The only country less energy self-sufficient than Japan among the 36 members of the OECD, a rich-country club, is small, landlocked Luxembourg. Mr Kishida's administration has used this latest shock primarily to justify a revival of nuclear power. Its new energy-policy road map calls for "maximising the use of power sources that contribute to Japan's security and are highly decarbonising", including both nuclear and renewables. Nuclear accounted for around 8% of the electricity supply last year; the latest government targets envision the share bouncing back to 22-24% by 2030. The government has also announced plans to extend the operating lifespan of reactors from 40 to 60 years and to build new ones. Together, the changes amount to a "U-turn" back towards nuclear power, says Tom O'Sullivan of Mathyos, a Tokyo-based energy consultancy.

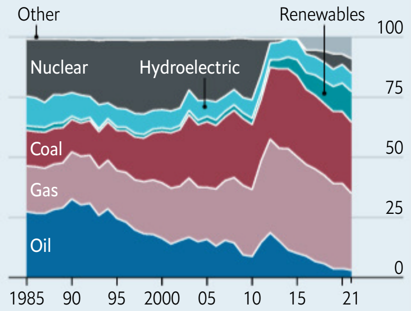
Turning on well-regulated nuclear plants in order to phase out coal is sound policy. But there is a risk that the turn will also slow or reverse the recent momentum behind expanding renewables. "The real issue is how to aggressively and rapidly install more solar and wind," says Iida Tetsunari of the Institute for Sustainable Energy Policies, a think-tank in Tokyo. "Japan is falling behind the global curve." Japan generates about half as much electricity from renewable sources as its European peers. Experts who seek to explain this are divided into two camps. One focuses on geographical limitations: a lack of flat land for solar panels and deep ocean shelves that make it relatively hard to install offshore wind turbines. The other reckons the barriers are primarily political: onerous regulation, vested interests and a system of regional power monopolies that do not share power effectively across the country. Under Mr Suga, reformist ministers sympathetic to the latter camp drove the recent progress on renewables; under Mr Kishida, voices from the former camp have once again come to dominate the policy debate.

The latest plans for renewable expansion are accordingly far less ambitious than many want. The government envisages the share of renewables in electricity growing to 36-38% by 2030, just over half the level the EU is projecting. Mr Kishida's strategy also earmarks money for a big upgrade of transmission lines, including between the windy but sparsely populated northern island of Hokkaido and population centres around Tokyo. But efforts to make the grid operate more flexibly and nimbly have stalled, Mr Iida laments. Plans to implement carbon pricing, while a welcome step, may be too little too late: Japan's carbon tax will only come into force in 2028, and at levels that will probably be too low to make very much of an impact.

Nor is Mr Kishida's planned nuclear revival a sure bet. Restarting plants is subject to regulatory and local approval processes that the central government cannot short-circuit. Public opinion has begun to shift in its favour. According to polls by *Nikkei*, a business newspaper, 53% of Japanese support restarting reactors so long as safety can be ensured, the first time a majority has been in favour of this in more than a decade. Some people living near the reactors would like to keep them and the subsidies they bring. Yet mistrust is widespread; plenty of others fight the reopening. In Onagawa, residents have sued to prevent the restart, claiming that the government's disaster-evacuation plan is gravely flawed. Of Japan's 33 remaining reactors, only ten have restarted. Mr Kishida wants seven more to come online this year; to reach the 2030 target, he would need another ten or so beyond that. Many energy gurus suspect that this will be impossible. ■

Emissions tsunami

Japan, electricity generation, by source, % of total



Source: BP

Myanmar

The hidden powers of flowers

SINGAPORE

The junta is deeply superstitious

FOR CENTURIES the Htilominlo Temple in Myanmar has been a site of pilgrimage for would-be rulers. One such excursion took place in the twilight of Myanmar's democratic era: General Min Aung Hlaing, the army chief, attended a ceremony there in 2020 to venerate the pagoda's tip—a gilded spire known in Burmese as an "umbrella", itself a symbol of royal power. Standing beside a Buddhist monk believed to be his astrological adviser, the general sprayed the pagoda with banknotes. A year later he seized power in a coup.

Min Aung Hlaing has not just put his country back under the armed forces, which ruled Myanmar from 1962 to 2015. He has also restored the high-level mumbo-jumbo for which previous military dictators were known. This does not augur an end to the country's civil war. It suggests the dictatorship regards the mystic realm as a more important fount of legitimacy and staying power than public opinion (which is against it).

Deference to fortune-telling is widespread in Myanmar. Many of its 54m people practise *yadaya*, the ritual of following astrological instructions. The country still marks independence on January 4th at 4:20am, a date and time selected by fortune-tellers in 1948. And the country's generals appear to be especially superstitious. It was in part at an astrologer's urgings that Than Shwe, who ruled the country from 1992 to 2011, moved the capital in 2005 from Yangon to Naypyidaw, a city built from scratch in the jungle. (A deadly cyclone which hit Yangon three years later looked like divine vindication.) An explosion of coerced sunflower cultivation took place across Myanmar around that time, allegedly because Than Shwe's soothsayers believed it would prolong his rule ("sunflower" in Burmese is a homophone for a word that means "long-lasting").

Than Shwe's lucky number was 11. On his watch, the junta developed a preference for handing out 65-year prison sentences to dissidents, and announcing them at days and hours containing or adding up to 11. Min Aung Hlaing is said to be enforcing his writ through an even more brutal superstition. The high number of people killed in recent unrest from bullets to the head is reported to be a tactic suggested by his astrologer.

The junta also appears to be leaving nothing to chance when it comes to sunflower production. It fell during the years of civilian rule. This year the regime aims to cultivate 1.5m acres of the crop, up from 600,000 acres in 2021. It says it wants to produce more sunflower oil and curb expensive imports of palm oil. But no equivalent targets exist for other edible-oil crops like sesame or peanuts, notes a Burmese official.

The regime's opponents also resort to superstition. As riot police prowled around after the coup, protesters strung up women's clothing, which it is bad luck for men to pass under. After reports of villagers being coerced into sunflower-planting, online dissidents shared images of lotus buds, the Burmese name for which translates as "It won't last long".

India offline

Digital dead zones

MUMBAI

Stalling internet growth is especially bad news for the poor

WHEN INDIA implemented its first lockdown in 2020 and its schools moved over to online learning, Sharmila found herself in a quandary. She is a maid in the posh western suburbs of Mumbai; she had enrolled her son and daughter in a fee-paying school. But her family possessed a single smartphone. So her children would either both have to skip some online classes or one would have to miss them all. Happily, her employers gave her a second smartphone, at a cost of 10,000 rupees ($122). That is more than Sharmila's monthly wage.

Most Indians lack such a benefactor. Of the country's roughly 1bn mobile-phone users, a third still use old-fashioned dumbphones, mainly for voice calls. And recent data suggest that they are not about to upgrade them. All but a tiny proportion of Indian internet users get online using their phones. Yet the number of wireless broadband connections is flat. In October last year, the latest month for which figures are available, the telecoms regulator counted 790m wireless broadband connections, barely exceeding the previous peak of 789m, which was recorded in August 2021. (The number of subscribers is lower than this, because many people have more than one connection.)

Smartphone sales are down. After growing for a decade, sales peaked at 161m units in 2021, according to IDC, a market researcher, which reckons that last year the number fell to 148m. Meanwhile the average smartphone price has surged, from $163 before the pandemic to $220 in 2022.

Prices are rising in part because of global factors, including supply-chain bottlenecks, Chinese lockdowns and rising component costs. But it is also because manufacturers no longer find it worth their while to sell ultra-cheap phones, says Navkendar Singh of IDC. The market share of smartphones costing less than $100 dropped from 30% in 2019 to 12% last year, according to Counterpoint, another research firm. Before the pandemic some 5m people traded up from a dumbphone to a smart one every month. That dipped last year to about 3m, says Shilpi Jain, an analyst with Counterpoint. Mobile subscriptions are getting dearer, too. In the year to June 2022, prices rose 28%. The number of converts, from dumb to smart, is expected to fall again this year.

This dumb phone

Stalling growth in internet use will have profound implications for millions of poor families. The government has increasingly defaulted to online solutions, including for booking covid-19 vaccinations. Most adults under 45 without a smartphone were at first told to trek to a government office to get registered. Only after an uproar were walk-in vaccinations permitted.

And that row has not tempered official enthusiasm for digitisation. A new programme aims to give every Indian "a hassle-free method of accessing and sharing your health records digitally". The government is enthusiastically promoting digital payments through its Unified Payments Interface, a cashless system that has gained widespread popularity. Its biometrics-based national identity system now covers nearly every Indian resident and is all but mandatory when interacting with the state. A covid-tracking app was also voluntary in name only.

A number of recent studies point to the scale, and deep unfairness, of the digital shortfall. GSMA, a telecoms trade body, estimates that half of adult Indian men owned a smartphone in 2021. Only a quarter of Indian women did. Another divide is between rural and urban India. The internet penetration rate is 103% in cities (because of individuals with multiple connections) and 38% in the countryside. Three-quarters of graduates have a mobile phone of some sort, while three-quarters of those with primary-school education do not.

These disparities risk upending what have been very promising efforts to improve Indian governance through digitisation. "The evaluation of what makes it better should be from the point of view of the average Indian," says Apar Gupta of the Internet Freedom Foundation, a digital-rights organisation. "And the average Indian, especially in rural areas, does not have access to the internet." ■

No fly zone

South Korea and China get testy

SEOUL

China uses a spat over visas to probe for South Korean weaknesses

IT HAS BEEN tough these past few years for the shopkeepers around Gyeongbokgung Palace, once home to Korea's Joseon dynasty and now the most prominent tourist attraction in Seoul. In 2019 6m Chinese tourists visited South Korea, filling the cash registers of local restaurants in the South Korean capital and the shops that rent out *hanbok* (traditional Korean garb in which tourists pose in the palace grounds as if in their favourite historical drama). With the pandemic, Chinese visits fell to nearly nothing. So when the government in Beijing suddenly abandoned its draconian lockdowns and tight restrictions on foreign travel, Chinese snapped up tickets to South Korea. Expectations in Seoul soared. Now a spat between the two countries has left Chinese tourists grounded—along with shopkeepers' hopes.

Worried about the Chinese government's reluctance to publish accurate covid-19 data, and fearing a fresh outbreak seeded by Chinese visitors, South Korea ruled late last year that travellers from China must test negative both before and after arrival. (Like much of East Asia during the pandemic, South Korea followed strict visa controls and quarantine requirements.) Then on January 2nd it stopped issuing short-term visas to Chinese nationals. This week China responded in kind, refusing to issue even transit visas to South Koreans merely passing through the country.

Putting on a brave face, South Korea's prime minister, Han Duck-soo, insisted that China's decision did not count as "retaliation". China disagrees. A government spokesperson decried "discriminatory entry restrictions" and described his country's actions as "reciprocal measures". China's measures will be "adjusted" when South Korea corrects its behaviour.

Japan has been treated to similar measures. But dozens of other countries that imposed travel restrictions on travellers from China have managed to avoid being targeted in this way (see China section). China, Japan and South Korea share a complicated and often troubled history. South Korea and Japan are used to serving spells in the doghouse when they do not bend to China's will. For South Korea's president, Yoon Suk-yeol, who came to power in May, this spell is probably intended to probe for weaknesses.

All South Korean presidents walk a fine line. America guarantees the country's se-

▸▸

Banyan The wages of violence

Abe Shinzo's killer achieved all his political objectives

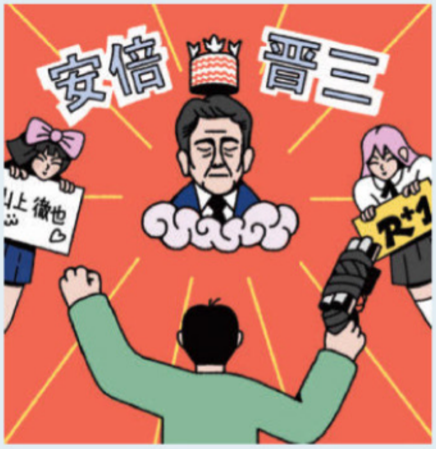
"REVOLUTION+1", A NEW Japanese film, opens with actual footage of the killing of Abe Shinzo, Japan's former prime minister, last July. The grainy frames show Abe giving a stump speech in Nara while his assassin, Yamagami Tetsuya, approaches from behind wielding a homemade gun. The feature film proceeds to portray a sympathetic protagonist named Kawakami, whose biography bears a striking resemblance to Abe's actual killer: his father committed suicide, as Mr Yamagami's did, and his mother fell under the spell of the Unification Church (UC), a cultlike group.

The film shows the extent to which Mr Yamagami, who said he murdered Abe because of his links to the church that ensnared his mother, has captured the Japanese imagination. The killer is seen by some as a dark hero, a crusader for the country's underclass. Online, he is sometimes referred to as Yamagami Resshi, or Yamagami the Martyr. Female fans who fawn over him are known as "Yamagami Girls". The prison where he is being held has reportedly run out of space to store the gifts sent to him. Even denunciations of his deed are often only throat-clearing. "Of course, it's bad to kill people," a female viewer of "Revolution+1" mused after a recent screening in Yokohama. "But for Yamagami murder was the only way to achieve his goal."

That illustrates a grim truth: Mr Yamagami's political violence has proved stunningly effective. Until last summer few in Japan gave much thought to the UC, a Korean outfit often known as the "Moonies". Now the country has become obsessed with it. The most searched "what is" query on Google in Japan in 2022 was "what is the Unification Church?" Television talk shows have featured people whom the group allegedly manipulated into making large donations. Japanese media have pursued stories about ongoing ties between the group and members of the ruling Liberal Democratic Party (LDP).

The government has scrambled to respond. One official told Banyan late last year that it was spending half its time trying to clean up the issue. An inter-agency consultation centre for victims of the church was launched in September. Two months later the education ministry opened an investigation of it—the first such probe of a religious group—setting the stage for the UC to be stripped of its tax-friendly religious-corporation status. A new law aimed at defanging it and similar groups came into force last week: it bars them from soliciting donations through fear. It also gives recusant members a right to claim back their tithes. The LDP conducted an internal inquiry to suss out ties between its legislators and UC members; three ministers had to resign over such links.

The political fallout may not be over. Kishida Fumio, Japan's prime minister, saw his ratings drop from over 50% to the low-mid 30s, in part due to his handling of the issue; his premiership has been so diminished that political insiders suggest he may struggle to make it through the year. The continued high profile of Mr Yamagami's case will make that even harder. On January 10th court psychiatrists pronounced the killer fit to stand trial; prosecutors are due to file an indictment by January 13th. Mr Yamagami faces charges that could land him in prison for decades. (Though Japan has the death penalty, it is rarely handed down in cases with one victim.)


安倍 晋三
山上 徹也
R+1

Political violence seldom fulfils so many of its perpetrator's aims. The previous killing of an elected leader in Japan, the shooting of Nagasaki's mayor by a local gangster, led only to a crackdown on the yakuza. An attacker stabbed Abe's grandfather, Kishi Nobusuke, in 1960 amid fractious debates over Japan's security treaty with America, but neither killed him nor halted the treaty's passage. The director of "Revolution+1", Adachi Masao, was himself once a member of the Japanese Red Army, a militant leftist group responsible for a massacre at Lod airport in Tel Aviv in 1972; two of the attackers were killed, a third wounded, and the Palestinian cause they supported was not advanced.

To find an equally consequential act of political violence in recent Japanese history, one must look to the 1930s. At that time, far-right groups within the armed forces carried out a string of assassinations that helped plunge Japan into fascism. Mr Yamagami, at least, acted alone and seems to have had no ideological bedfellows. Yet it is all too easy to imagine another malign individual taking inspiration from his twisted and lamentably effective crime.

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curity. But China, which is South Korea's largest trading partner, underwrites its prosperity. It is hard to keep both powers happy at once. Mr Yoon has drawn closer to America on matters of both security and economics, but also wants a relationship with China based on "mutual respect". That phrase is often used by China itself in its strong-arm dealings with lesser countries. The tit-for-tat visa restrictions suggest it thinks that respect from South Korea is insufficiently ample and unquestioning.

China has stopped visitors coming before. When South Korea agreed to host an American missile-defence system in 2016, the Chinese government initiated a (largely undeclared) consumer boycott of South Korean businesses. Tour groups to South Korea were forbidden. The ban was still in place when the pandemic struck.

Analysts in South Korea think that China is trying to test Mr Yoon's mettle. South Korea has quietly been looking to move supply chains for critical industries such as semiconductors and batteries away from its overbearing neighbour. The Chinese government has taken note, warning South Korea against "decoupling".

Mr Yoon looks to gain by not yielding. Losses for tourism notwithstanding, South Koreans appear happy to be sheltered from any possible outbreak (over a fifth of travellers arriving from China were testing positive). More broadly, recent opinion polls suggest growing dissatisfaction towards China. Stories such as that of a Chinese national who fled a quarantine facility on January 3rd, only to be caught two days later, do not help. The tit-for-tat restrictions will presumably end soon. But Mr Yoon will surely be subjected to other tests in future. ■

Kashmir

A police state with tulips

SRINAGAR

The government's new era of peace and prosperity is a fiction

THINGS HAVE been going swimmingly in Jammu and Kashmir ever since Narendra Modi, in August 2019, turned off the internet, locked up thousands of politicians and academics, and split India's only majority-Muslim state into two federally-run units, or union territories. Just ask the government. Where separatists used to put stones and guns into young people's hands, the prime minister "replaced them with mobiles and laptops by setting up industry and providing employment", Amit Shah, the home minister and Mr Modi's chief lieutenant, told reporters during a recent visit to Srinagar, Kashmir's main city. Where Kashmiris used to live in fear and penury, chimed in Manoj Sinha, the Delhi-appointed governor of the territory, in December, there are now far fewer deaths from terrorism, the press is free and there will soon be elections.

Much of this is untrue, as Kashmiris were reminded in early January when six civilians, including two children, were killed in attacks on a village in south-western Kashmir. And as Ayub Nadaf is reminded daily. The 19-year-old has been in jail in Srinagar for almost 16 months without trial after police accused him of being "complicit" (they did not say how) in the killing of a policeman. His mother wept as she protested his innocence: "Ayub is the only child I have." Rather than free Kashmir from separatist violence, poverty and corruption, the Modi administration's hardline approach appears to have made its political troubles even more intractable without making the region obviously safer, less wretched or more prosperous.

Working out what to do about India's independent-minded northern corner has been a headache for all India's governments, especially since an outbreak of separatist violence in 1989. Mr Modi's tough approach rests upon a two-pronged strategy. To fight terrorism, his government has deployed even more troops to the region—roughly half a million are overseeing a population of 7m—and intensified surveillance and control of Kashmiris' lives. To accelerate economic development, the government is meanwhile promoting outside investment, especially by stressing the joys of Kashmir as a tourist destination. Yet these contradictory measures seem to be cancelling each other out.

The extra force has not so much reduced militancy as changed its nature. Terrorists are launching fewer indiscriminate attacks. After a spike in 2018, ahead of Mr Modi's takeover, the number of civilians killed in the violence is back to the levels of the early 2010s. The militants are instead targeting the many soldiers and, especially, non-Kashmiri guest workers whom the government has sent to Kashmir. This is not reassuring would-be investors. Private investment in Kashmir in 2022 was less than half the level in 2018, according to figures released in December. "It's still too much of a conflict zone for investment to make sense," says an academic (who asked not to be named) in Srinagar.

Tourism, it is true, has seen a modest recovery—backed by a government campaign that portrays Kashmir as a peaceful, picturesque place full of colourful tulip gardens and cosy homestays. Visitor numbers in 2022 were roughly the same as in 2018. Yet tourism, which currently accounts for 6% of Kashmir's GDP, would have to take an almighty leap to be a major driver of growth. Meanwhile unemployment at the end of 2022 stood at 24%, three times the national rate. And public services are languishing with the economy. At a brilliantly lit lakeside tourism show, one wintry recent night in Srinagar, a local admired the dancing but drily wished, given relentless power cuts, that some of the electricity could instead have been supplied to his home.

Life in Srinagar is in many ways grim. Locals report frequent harassment at a proliferating number of checkpoints, such as police confiscating motorbikes whose owners fail to produce the correct paperwork. Mr Nadaf, the imprisoned youth, is being detained under the Public Safety Act (PSA), a draconian anti-terror law that allows the state to keep suspects in jail for up to two years without trial. Its use has ballooned since 2019, when the government used it to lock up thousands of Kashmiri politicians, including three previous chief ministers, for several months.

And the PSA is still being used against critics of the government. Fahad Shah, a respected journalist, has been in jail under the act for nearly a year after authorities claimed his reports "glorified terrorism". Patchy evidence suggests that there are either many innocent people in jail or a lot more militants than there used to be: in 2022, there were 841 pending petitions challenging arbitrary detention, mostly related to the PSA. Before 2019, the average was around 300 a year, says Bashir Ahmad, a lawyer in Srinagar: "It has got harder to get such cases listed for early hearings."

Locals suspect the government's efforts to promote outside investment will not so much spur development as dispossess Kashmiris. "Everything is about snatching land, jobs and resources from locals here and giving them away to wealthy corporate allies of the present dispensation," says Mehbooba Mufti, chief minister of Jammu and Kashmir until it lost its statehood.

During his visit to Srinagar, Mr Shah promised elections would be held in Kashmir soon. Few Kashmiris believe this, in part because Mr Modi's Bharatiya Janata Party would struggle to win them. Even if elections are held, Ms Mufti and other local politicians say they will boycott them unless Kashmiri statehood is restored. Which is not on the cards. Kashmir's immediate future appears to be as an impoverished police state, run from Delhi, with light shows and tulip gardens, but little peace, liberty or prosperity. ■

The end of the line in Srinagar

Foreign affairs

Data, diplomacy and disease

Covid-19 is complicating China's efforts to re-engage with the world

In his annual New Year's Eve address, President Xi Jinping struck an unusually measured tone. There was no call for unification with Taiwan, unlike the previous year, and none of the dark warnings about external forces that he voiced at a Communist Party congress in October. "We cherish peace and development and value friends and partners," he said on December 31st. At home it is "only natural for different people to have different concerns or hold different views on the same issue," he added.

Some detect a similar timbre in China's recent diplomacy, including with countries long in Mr Xi's bad books. The sweet talk has extended even to America. In a *Washington Post* op-ed on January 4th, Qin Gang, China's outgoing ambassador in Washington and new foreign minister, expressed his appreciation for America's "friendly and hard-working" people, as he recalled his exploits there, including riding a tractor in Iowa and throwing the first pitch at a baseball game in Missouri.

The shift suggests to many observers that, as China reopens, Mr Xi is keen to repair some of the damage done to his country's foreign relations over the past three years, when it was largely isolated from the outside world and saw attitudes towards it hardening in America and many other democracies. But if Mr Xi's aim is to undermine his critics abroad and empower those advocating re-engagement with China, there is a flaw in the plan: his reluctance to share more complete data on the wave of covid-19 ripping through the country.

After repeated requests from the World Health Organisation (WHO), China has started sharing more genetic sequences of the virus from recent cases. According to GISAID, an international repository of viral genetic information, China submitted 15 sequences from two regions in the 17 days after lifting its "zero-covid" restrictions on December 7th. By January 9th it had provided 880, covering 11 of its 31 provinces (and province-level cities and regions). There was no evidence of new variants.

Still, relative to the size of its population and its covid wave, the number of sequences China has submitted is insufficient to track the evolution of the virus, public-health experts say. Moreover, China is still not providing enough data on intensive-care-unit (ICU) admissions and deaths to allow experts to assess quickly how the virus is behaving there and how dangerous any new mutations may be. Most absurdly, Chinese authorities reported only 37 covid deaths between December 7th and January 8th, the latest date for which official figures were available. Scientists' models, satellite images of crematoriums and other independent sources suggest the real total is probably in the tens, if not hundreds, of thousands.

Even the WHO, usually reluctant to criticise China, has been damning. Dr Michael Ryan, its emergencies chief, said on January 11th that China was "heavily" under-reporting covid deaths and blamed the narrowing of its definition in December to include only those from covid-caused pneumonia or respiratory failure. He also praised America's transparency over the XBB.1.5 variant spreading rapidly there. Liang Wannian, a senior Chinese health official, said China's priority was treatment, not establishing cause of death.

Several foreign governments have been critical, too, with at least 32 imposing restrictions on travellers from China as of ▸▸

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January 10th, mostly requiring a negative covid test result (see map). With notable chutzpah, China has denounced such measures as politically motivated and threatened counter-measures—while maintaining its own demand that arrivals must show a negative PCR test result. Tellingly, though, it is not just Western countries imposing such restrictions on China: India, Ghana, Qatar and Costa Rica have done so too. And while these may do little to contain the virus, the WHO says China's lack of transparency makes them understandable.

The row over travel restrictions may blow over soon, not least because many countries are desperate to welcome back Chinese tourists. But the spat could get uglier, especially if China singles out America or European countries for new restrictions. On January 9th China's foreign ministry voiced concern about the XBB.1.5 variant, urging America to do more to contain it. The next day the Chinese government stopped issuing some visas in South Korea and Japan in retaliation for their new restrictions on travellers from China.

China's obfuscation of covid data is stirring memories of how it failed to share relevant information early in the pandemic and how it is still withholding data that could help to trace the origins of the virus. Nor is it lost on many democratic governments that Mr Xi is motivated by a desire to keep portraying his covid strategy as a success—and a demonstration of the superiority of his political model.

That could make it trickier for those who want America and its allies to take a less confrontational approach towards China. Few believe that Mr Xi's shift in tone implies a substantial rethink of policy, especially on core issues like Taiwan. But it does suggest to many a willingness to limit confrontation and perhaps seek progress in less sensitive areas.

Ryan Hass of the Brookings Institution, a think-tank, suggests that Mr Xi may be emulating Mao Zedong's strategy of "fight fight, talk talk", buying time to regroup and study opponents. Nonetheless, Mr Hass is urging the Biden administration to seize the opportunity to make progress in areas of mutual concern, such as climate change and disease surveillance.

But with an American presidential election looming in 2024, any such initiatives could be an even harder sell to America's public, given the fresh controversy over covid data and travel restrictions. China hawks on both sides of Congress will no doubt be emboldened too, including Kevin McCarthy, the new Republican Speaker of the House of Representatives. On January 10th the House overwhelmingly approved his proposal to create a new China select committee that can conduct investigations and hold public hearings. Another Republican-led committee is likely to pursue a probe into covid's origins.

European governments will probably be less overtly critical of China's approach to covid, just as they were in 2020. But that could change if a new variant does emerge in China and spreads to Europe, or if the Chinese government imposes new travel restrictions on European countries, says Noah Barkin of Rhodium Group, a consultancy. "I would not underestimate China's ability to undermine its own rapprochement with Europe by over-reacting."

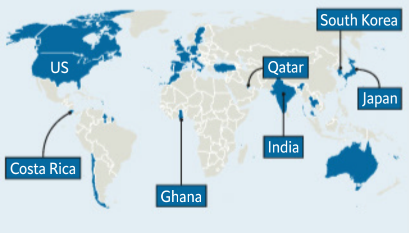
Nor will Mr Xi's withholding of covid data help to reverse the deterioration of public attitudes to China in Europe, where many are upset by its failure to criticise Russia's invasion of Ukraine. That is already fuelling a fraught debate within the European Union over how to balance commercial interests against national security and democratic values in dealings with Mr Xi. Any new tension over covid could further complicate efforts to re-engage with China by Olaf Scholz, the German chancellor, who visited Beijing in November, and by Emmanuel Macron, the French president, who is due there early this year.

The potential fallout for China is much less severe in the global south, especially among recipients of Chinese vaccines. At a briefing for foreign diplomats in Beijing on January 6th, ambassadors from Ecuador, Madagascar, Mongolia and Algeria praised China's covid response. Mr Qin, the new foreign minister, is unlikely to hear much criticism from his hosts during his first trip abroad in the post, which started on January 9th and includes stops in Ethiopia, Gabon, Angola, Benin and Egypt.

The risk, though, is that in Mr Xi's determination to preserve his public image, he will lose a rare opportunity to reset links with the West and make progress on issues of global concern. Among the biggest casualties would be preparations for the next potential pandemic. China is essential to such efforts because of its vast population, wildlife trade and large numbers of coronavirus-bearing bats. But as the world learned in the SARS pandemic of 2002-03, and again over the past three years, transparency is also of vital importance. ■

Right back at you

Countries with covid-19 restrictions for travellers coming from China, January 11th 2023



Source: UNWTO

Covid-19

Li Wenliang's online afterlife

Many have turned to one of the pandemic's earliest victims for comfort

It is nearly three years since Li Wenliang posted his last message on Weibo, a Twitter-like service. "The result of the nucleic-acid test today was positive. The dust has settled, and the diagnosis has finally been confirmed," the eye doctor wrote. A week later, on February 7th 2020, covid-19 killed him. His Weibo account, however, still hums with life.

As the disease, now freed from China's "zero-covid" restraints, sweeps the country, @xiaolwl is a shrine that draws an endless stream of visitors. Every three or four minutes someone adds a comment on his parting words. "Older brother Liang, recently I've been reading Camus's 'The Plague'," wrote one on January 10th, hinting at the calamity now unfolding.

Li Wenliang is a household name in China. Many Chinese hail him as a whistle-blower who was among the first to draw attention to the pandemic as it emerged three years ago in the central city of Wuhan, and who suffered for his honesty. At the end of 2019 he posted a private message to a group of former medical-school classmates on WeChat, another popular social-media platform, about the detection of several SARS-like cases. He told them to be on guard. Within hours officials forced him to write a "self-criticism" for divulging "false information". On January 3rd 2020 the police made him sign a warning that any repetition of his "illegal action" could result in prosecution.

When Li died, his Weibo account became a lightning rod for public discontent. It was flooded with hundreds of thousands ▸▸

of messages of condolence, and sympathy for the injustice he had suffered. The numbers soon subsided, but people kept on posting comments on Li's last message. By mid-2020 the counter began showing "1m+". At that point Weibo stops updating the figure. But researchers at Fudan University in Shanghai, Zhou Baohua and Zhong Yuan, tallied more than 1.34m within a year of Li's death. In a paper in 2021 they said numbers shot up on certain occasions, such as in March 2020, when the government rescinded the police notice chiding him, and the following month, when provincial authorities recognised him as a "martyr".

The posthumous honouring of Li (not for whistleblowing, but for being a Communist Party member who was fearless in the face of covid) went some way to appeasing his supporters. It helped that many Chinese, at least until 2022, were backers of the zero-covid strategy. Still, some expressed dismay when, in September 2020, Li was not among hundreds of covid-fighting heroes honoured by Chinese leaders at a big ceremony in Beijing.

But instead of becoming a forum for dissent, Li's Weibo account took on a different hue: as a "wailing wall", as Chinese media described it. Visitors often posted messages about their daily tribulations. They asked Li for help in their love lives and their exams. Some simply bade him good morning or good night. Among emoticons they used was one of a fried chicken leg. Li loved fried chicken.

Since China began dismantling its covid controls in December, some have been using Li's wall to air their anxiety. "Older brother Liang, old people are dying one after the other in my village and others around," said a visitor from Shanxi province. "Now we've basically all been infected. Fortunately the mutated virus is weaker, but many people are dying," said another from neighbouring Shaanxi. "Dr Li, death notices are filling the wall. Many old people have not survived the winter, including my grandfather," mourned someone from Zhejiang.

Most wailers refrain from directly attacking the official line. But they describe a scene that sharply contrasts with the government's claim of only a few dozen deaths from covid since early December. On the wall and other Weibo accounts, netizens refer to Li's most celebrated quote, from an interview given shortly before his last Weibo post: "In a healthy society, there shouldn't be just one voice." For all his celebrity as a whistleblower, he was a cautious man who said he didn't intend his warning about the coronavirus cases to spread beyond his friends. But among some Chinese, increasingly suspicious of what the government is telling them, those words resonate. ■

Protests and arrests

A different type of lockdown

BEIJING

China is still punishing those who protested against zero-covid

When protests against the government's "zero-covid" policy spread across China in November, some observers feared a violent crackdown was in the offing. The Communist Party, after all, has a history of such things. But the authorities' initial response was measured. Police watched in silence as crowds of young people in Beijing, Shanghai and other cities called for an end to mass testing and lockdowns. Officers did not interrupt even when a few protesters called for freedom of speech and the right to vote. The police chief of Beijing told one protester that the crowd had been heard.

Soon after the demonstrations, China's government ditched most of its covid controls. A recent article by Xinhua, a state news agency, did not mention the protests, but it noted that public "fatigue, anxiety, and tension" had been rising and that this had helped change policymakers' minds. The party likes to claim that it is responsive to the public mood.

But it does not like politically charged protests. So even as the government was dismantling its zero-covid machine, it was also pursuing those who pushed for it to do so. In the days and weeks after the protests, police tracked down many of those involved using facial-recognition technology and mobile-phone data. Some were brought in, interrogated and made to sign a document confessing their mistakes. Others were reportedly strip-searched.

Most were released within a day. But at least eight people who attended the protests in Beijing have been detained since mid-December, according to their friends. Most of them are women in their 20s with white-collar jobs. Reports suggest that several other people have been detained as well. In a post on Weibo, a social-media platform, a lawyer for one of the detainees claimed the police were making it hard for him to meet his client.

The detainees might be released after they have been held for 37 days, the maximum allowed before a formal arrest must be made. Protesters in the city of Guangzhou were released this month after a few weeks in jail. But there is also the possibility that those still locked up will be charged under vague public-order laws and kept in detention.

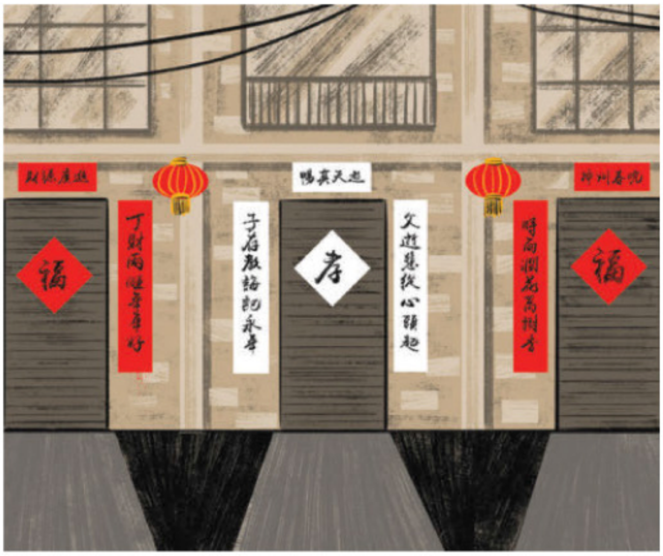
Paranoia may be shading the government's treatment of the protesters. Officials and pro-government commentators have claimed that foreign forces were behind the unrest. America and other Western countries are the usual suspects. China's ambassador to France, Lu Shaye, likened the anti-covid protests to the "colour" revolutions that swept through the former Soviet Union. China blames those on Western machinations, too. "White is also a colour," noted Mr Lu, in reference to the blank sheets of papers held up by protesters in China as a way of highlighting official curbs on expression.

It is not as if public anger needed stoking from abroad. The government's covid controls were ensnaring an increasing number of people and harming the economy. Frustration with zero-covid was growing. The protests were just the latest sign of this. People had already been tearing down barriers and clashing with police. As the Omicron variant spread, it was becoming increasingly clear that zero-covid was unsustainable. At last, the government bowed to reality. It does not want to be seen as having bowed to the demands of protesters, lest it encourage more. ■

Who are they protecting?

Chaguan | China's strange new year

Though covid-19 is blowing through rural villages like a gale, many seem ready to move on



IN RURAL CHINA, the story of this month's lunar new year will be told in two colours: festive red and the white that signifies mourning. For many country folk, the holiday—which this year falls on January 22nd—will mark a return to near-normality. China has dropped the pandemic controls that blighted each new year after a strange virus emerged in the city of Wuhan weeks before the Spring Festival in 2020 (to use the holiday's other name).

A mood of pent-up celebration can be felt in Goulin, a scruffy township strung along a busy highway in the south of Henan, a poor central province. On a recent weekday, locals throng a street market selling red *chunlian*, the new-year banners that will soon hang above and to either side of front doors, bearing poetic couplets expressing wishes for good fortune and health. Other traders hawk red underclothes, worn for luck. There is food in abundance: supplies for the homecoming feasts and family reunions that mark this most important of holidays, and that were thwarted by travel curbs and lockdowns for three years. Adults and wide-eyed children examine boxes of tiny tangerines, haunches of mutton and severed pigs' heads, basins of doomed, thrashing fish, and wooden barrows heaped with winter cabbages.

Yet more sombre scenes may be glimpsed at the same time, inside Goulin's bare-bones hospital. Though central authorities have stopped issuing credible covid-19 statistics, signs are that the virus swept through Henan's cities and villages at astonishing speed after controls were scrapped on December 7th, with infections peaking about two weeks later. Henan officials suggest that perhaps 89m of the province's 100m people caught the virus.

In Goulin hospital a faded poster from 2016 announces that the emergency department employs five doctors to cover a population of 200,000 (for comparison, America has 15 emergency-room doctors per 100,000 people). A doctor says the situation has stabilised, though many severe cases remain. His patients have low expectations. For instance, only a few have even heard of Paxlovid. In China's big cities, that potent antiviral treatment for covid has become an obsession, with boxes of the imported drug changing hands on the black market for staggering sums. Paxlovid is not available in Goulin. Instead, some patients receive a domestically made HIV treatment, Azvudine, given emergency approval in China as a covid therapy, despite scant reliable evidence that it works. To eke out limited supplies, the pharmacy opposite Goulin hospital sells such basic anti-fever medicines as ibuprofen in packets of a few pills, rather than by the box.

As of January 8th, China reported a total of 23 covid fatalities in 2023, an artificially low number that excludes deaths involving other conditions or complications. The true toll is very different. *Wanlian*—white banners bearing memorial couplets that adorn the front doors of households in mourning—will be hard to avoid in Goulin and surrounding villages this year. The crematorium in Dengzhou, the nearest county-level city, is still cremating over 100 people each day, and was handling up to 160 a day in recent weeks, says a funeral worker. The facility handled just 30-40 daily cremations before the pandemic, adds the worker, who reports that he is three times busier than usual, and blames covid.

Chaguan was not in southern Henan by chance. When the pandemic began three years ago, he headed to Goulin and nearby villages, because they lie on the border with Hubei, the province that surrounds Wuhan. Hubei was locked down on January 23rd 2020. Your columnist visited Weiji, the last Henan village on the road to Hubei, four days later. He found its muddy streets brightened by red lanterns and new-year banners, but largely emptied by fear. With covid's dangers still unknown, nervous police tested incomers' temperatures at a checkpoint and turned any cars from Hubei away. Neighbouring hamlets sealed themselves behind barriers of freshly dug earth. In Weiji some 200 migrant workers, back from Wuhan for new year 2020, had to quarantine at home while village doctors checked them for fever twice daily. Back then locals described obeying orders as a comfort.

Three years later Weiji residents talk of moving on. They have just endured a brutal few weeks that, village doctors estimate, saw over 90% of locals catch covid after a first case was found on December 4th. At moments 100 locals crammed each day into Weiji's clinic for saline drips and intravenous infusions of amino acids and antibiotics, supplemented by ibuprofen tablets and Chinese herbal treatments (drugs that may comfort but cannot cure covid). Reportedly, one villager died. Four more were sent to Goulin hospital. Locals seem focused on resuming normal life. A woman in her 80s sits on her doorstep washing mahjong tiles. She recalls when mahjong playing was banned during the strictest lockdown in 2020, on pain of fines. A migrant worker, home for the holidays, compares covid to "a wind that has blown through". Asked if they fear returnees bringing the virus, locals scoff: "we've all had it."

The cruel gulf between China's cities and villages

Asked whether clinics were prepared for the sudden policy change, a rural doctor instead describes how onerous controls became late last year. An end to zero-covid, followed by a surge in cases, was unavoidable, says the doctor, holder of a vocational degree. "Everything has to have a beginning and an end," she says.

Evidence of official bungling is there to see. In nearby Tongbai county a two-storey quarantine centre for 1,000 people sits empty, brand-new air-conditioning units bolted to its windows. It was still being built as zero-covid ended in December, neighbours report. Amid such waste, Tongbai's largest hospital has no spare beds when Chaguan visits, and no Paxlovid. As often before, rural Chinese are mourning avoidable losses. China may see a second wave in coming months. But in Henan villages resignation, and the human need for hope, are more commonly encountered than indignation. At new year, red is more popular than white. ■

Demography

The age of the grandma

BEIJING, DAKAR, MEXICO CITY AND STOCKHOLM

As lifespans stretch and fertility falls, the ratio of grandparents to children is higher than ever before. That has big consequences

THE MOST saccharine song of 1980 was "There's No One Quite Like Grandma", performed by the St Winifred's School choir from Stockport, England. It shot to the top of the British charts as kids everywhere gave it to granny for Christmas. "Grandma, we love you," they sang. "Grandma, we do. Though you may be far away, we think of you."

Today, as the once-cherubic choristers start to become grandmas and grandpas themselves, grandparenting has changed dramatically. Two big demographic trends are making nana and gramps more important. First, people are living longer. Global life expectancy has risen from 51 to 72 since 1960. Second, families are shrinking. Over the same period, the number of babies a woman can expect to have in her lifetime has fallen by half, from 5 to 2.4. That means the ratio of living grandparents to children is steadily rising.

Surprisingly little research has been done into this. *The Economist* could not find reliable figures for how many living grandparents there are, so we asked Diego Alburez-Gutiérrez of the Max Planck Institute for Demographic Research in Germany to produce some estimates by crunching UN age and population data with models of kinship structures in each country.

We found that there are 1.5bn grandparents in the world, up from 0.5bn in 1960 (though the further back one goes, the fuzzier the estimates become). As a share of the population they have risen from 17% to 20%. And the ratio of grandparents to children under 15 has vaulted from 0.46 in 1960 to 0.8 today.

By 2050 we project that there will be 2.1bn grandparents (making up 22% of humanity), and slightly more grandparents than under-15s. That will have profound consequences. The evidence suggests children do better with grandparental help—which usually, in practice, means from grandmothers. And it will help drive another unfinished social revolution—the movement of women into paid work.

Since fertility rates and life expectancy vary enormously from country to country, the age of the grandparent has not yet dawned everywhere (see chart 1 on next page). They are 29% of Bulgarians but only 10% of Burundians. Their average age varies widely, too, from 53 in Uganda to 72 in Japan (see chart 2 on next page). To understand what a difference plentiful grandparents make, a good place to start is in a country where they are still scarce.

Consider Senegal. Most rural Senegalese are subsistence farmers. Although fertility has dropped from 7.3 babies per woman in 1980 to 4.5 today, large families remain the norm. Children under 15 outnumber living grandparents by 3.5 to 1.

Amy Diallo, an 84-year-old matriarch wrapped in a blue and white hijab, has to think carefully when asked how many she has. "Thirty," she concludes, looking up from her cross-legged position on the floor of her home in Tally Boubess, outside Dakar, the capital, on a street where horses and carts jostle with sheep and cars.

As the oldest member of her family, she commands respect. She offers moral guidance to the young: be honest and pious, uphold tradition and stop hitting your younger brother. Every year she leads a family pilgrimage to Tivaouane, a Muslim holy city, with children, grandchildren, great-grandchildren and various in-laws, perhaps a hundred in all.

Grandparents pass on traditional beliefs, stories, songs and a sense of history. More prosaically, they bring an extra pair of hands. That helps both parents and children. A study in rural Gambia, for example,

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found that the presence of a maternal grandmother significantly increased a child's chance of living to the age of two. In sub-Saharan Africa the odds of being in school are about 15% higher for children living with a grandfather and 38% higher for children who live with a grandmother.

As for Mrs Diallo, she has never worked outside the home. But she has helped some of her offspring to do so. Ndeye, one of her daughters, got a job in an office despite having eight kids herself, because Mrs Diallo helped out with the children.

Yet for all her sense of love and duty, Mrs Diallo cannot babysit all 30 grandkids. The state offers little help. Unlike Ndeye, many of Mrs Diallo's daughters and granddaughters have never worked outside the home. This is common: barely a third of working-age women in Senegal are either in work or seeking it. Grandparents in the poorest countries do their best, but there are not enough of them.

She's there in times of need

In richer places, fertility has fallen much further than in Africa. A typical Mexican woman, for example, can expect to have only two children, down from nearly seven in 1960. Mexico's ratio of living grandparents to children is three times higher than Senegal's. Mexican *abuelas* thus have more time to lavish on each grandchild.

Irma Aguilar Verduzco lives with her daughter, also called Irma, and two grandchildren, Rodrigo and Fernanda. She cooks, does school runs and reads with her grandchildren. Ever since he was three, Rodrigo, now 16, has liked to take a cup of coffee and sit down for a chat with his grandmother. Fernanda, now 12, still likes to get into bed with her. Irma junior, meanwhile, has long worked 12-hour days, currently as a manager at the Maya Train, a big rail project. She is divorced, and says her ex-husband "does not help". She "could not have done anything" without Irma senior's help.

Grandmothers are the main source of non-parental child care for young children in Mexico, especially since covid-19 forced many nurseries to close. They watch over nearly 40% of sprogs under six. Before grandma moved in, Irma was struggling. "There is no understanding or flexibility for working mothers in Mexico," she complains. Her kids were often home alone. "Sometimes I paid people to look after them but it was hard to afford and hard to trust people." One day, years ago, Rodrigo came home from nursery with a broken bone; Irma suspects mistreatment. With her mother around, she feels relaxed.

Miguel Talamas of the Inter-American Development Bank and his colleagues have tried to estimate how much Mexican grandmothers help their daughters get paid work. They looked at what happened to families after grandmothers die. An *abuela*'s death reduced by 27%, or 12 percentage points, the chance that her daughter was in the labour force, and reduced her earnings by 53%. (The same study found no effect on the employment rate of fathers.)

Living with grandparents is not always easy. They may have outdated ideas or demand too much deference. In India, where couples traditionally live with the husband's parents, a genre of television drama turns on the fraught relations between wives and mothers-in-law. A study of rural Indian women in 2018 found that those who lived with their *mummyji* (mother-in-law) had little freedom. Only 12% were allowed to visit friends or relatives alone.

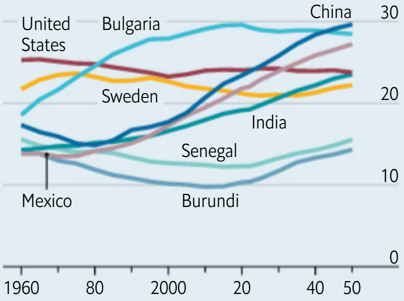
A grandma who enforces old-fashioned norms of wifely subjugation can make it harder for her daughter-in-law to work outside the home. But an intriguing study finds that on average, this effect is outweighed by the help the mother-in-law gives with domestic chores. Such help has become more concentrated as India's fertility rate has fallen, from six in 1960 to just over two today. Madhulika Khanna of Amazon and Divya Pandey of 3ie, a think-tank, looked at what happened to Indian women if *mummyji* died. They found the daughters-in-law were 10% less likely to do or seek paid work, probably because they had to spend more time collecting firewood and minding their children. Even overbearing grandmothers can inadvertently do their bit for female emancipation.

Rich countries generally provide services that help women juggle child-care and work. But many parents seek extra help from grandparents nonetheless. Old-age pensions help, by allowing grandparents to give up work. According to one survey, 50% of very young children, 35% of primary-school-aged children and 20% of teens in America spend time with their grandparent in a typical week.

This can make a big difference. Janice Compton of the University of Manitoba and Robert Pollak of Washington University crunched American census data and found that living within 25 miles of a grandmother raised the labour-force participation rate for married women with small children by 4-10 percentage points.

Senior moments 1

Population who are grandparents, %

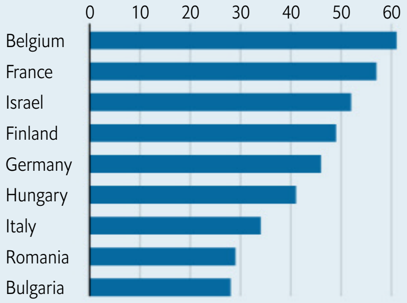


Sources: "How many grandparents are there in the world?", D. Alburez-Gutierrez, 2023; *The Economist*

Retirement? What's that? 2

Grandmothers saying they regularly look after their grandchildren*, %

Selected countries, October 2019-March 2020



Source: Survey of Health, Ageing and Retirement in Europe (SHARE) Wave 8

*During the past 12 months

"Granny nannying", as some call it, can have downsides, too. A British study found grandparents are more likely to leave their wards near fire hazards than nurseries or nannies. Studies from America, Britain, China and Japan suggest that a child around grandparents is more likely to be obese, though whether this is due to spoiling or other factors is unclear.

To us a book she'll read

And although grandmas help daughters return to the workforce, that often means withdrawing from it themselves. "There is a clear trade-off," says Mr Talamas. Back in Mexico, Hermelinda Coapango Vázquez works as a manicurist but takes appointments only at times that fit around caring for her grandson. "My grandson is my life," she says. "I don't have a partner and I am not one for having lots of friends." A study from Brazil found that when children aged 0-3 were randomly assigned formal childcare, the family collectively earned more, mainly because grandparents and older siblings were freed up to work.

Another pitfall is that families that rely heavily on grandma for child-care are less likely to move and find a better job. A study by Eva Garcia-Moran of the University of Wurzburg and Zoe Kuehn of the Autonomous University of Madrid found that west German women who lived near their parents in-laws earn about 5% less and commute for longer than their peers.

Children parented solely or mostly by grandparents tend to be worse off than their peers. In America, where roughly 2% of children are raised primarily by a grandparent, Laura Pittman of Northern Illinois University found more emotional and behavioural problems among such adolescents than their peers. That is perhaps not surprising. If children are not living with their parents, it is often because something has gone badly wrong: a father in jail; a mother dead or incapable. In these circumstances, living with a grandparent is usually far better than the alternatives.

Katie Clark, a 68-year-old from Baton Rouge, Louisiana, has had sole custody of one grandchild and has temporarily cared for five others because of her daughter's addiction to opiates. She took charge of her daughter's first baby soon after she was born. About 12 years later, the daughter arrived, homeless, with five more. She abandoned her children in Katie's home, before returning with police to demand them back. The daughter currently has custody of the five children, and Katie fears she is neglecting them again. The child raised entirely by Katie is now at university.

In rural China, grandparents help reduce the harm caused by the government. Under the apartheid-like *hukou* (household registration) system, rural Chinese who move to cities are treated as second-class citizens. Their children are barred from local public schools, so they are often left behind with their grandparents in their parents' home village. But rural schools are often dire. Grandparents, though well-meaning, are often barely literate. Scott Rozelle of Stanford University finds that more than half of toddlers in rural China are cognitively delayed, partly because their grandparents do not realise that it is important to talk to them.

In Chinese cities the story is different. The one-child policy (which became a three-child policy in 2021) was always enforced more strictly in cities than the countryside. So many urban families consist of four grandparents, two parents and just one child. Thus, there is no shortage of caring hands. Urban children often live with grandparents during the week and see their hard-working parents on weekends.

Nurseries are pricey and distrusted in China. Grandmothers often retire in their 50s to watch over the precious only grandchild. This works well enough. The labour-force participation rate for Chinese women is, at 62%, slightly higher than America's. "If you want to give your child a good education, you have to work hard to earn a lot of money," says Zhou Bao, an architect and mother in a "4-2-1" family who has used both sets of grandparents for child-care. But "in the process of making money, you can lose the time spent with your child." And she expresses a common fear that grandparents tend to spoil their only grandchildren. "They can be too attentive," she says, "making them less independent."

The Communist Party promotes traditional values, such as family members caring for each other so the state does not have to. In Beijing the government even set up a school in 2005 to teach grandparents how to look after children better. But the next generation may not wish to shoulder the same responsibilities. Few middle-class parents today expect to be bringing up their children's children in a few decades, reckons Dan Wang of Hang Seng Bank. If they opt out of grandparenting, that could make it harder for their daughters to combine motherhood and work, fears Ms Dan.

Just stays a little while

Overall, looking after kids appears to be good for grandparents. Those who spend time with their grandchildren report lower levels of depression and loneliness. But one can have too much of a good thing. Youngsters can be exhausting, frustrating and objectionable. A study in Singapore, with mainly ethnically Chinese families, found that many looked after their grandchildren more out of duty than because they relished it. Many find it harder as they age. Some are squeezed in the "grandsandwich generation"—relied upon to help both their grandchildren and their own ailing parents. Some hanker for a more relaxing retirement. Grandma Irma in Mexico admits she would like to travel more as her grandchildren grow more independent.

One place where grandparents have plenty of time to relax is Sweden, where a strong welfare state means parents seldom rely on them. For each child, a Swedish couple can take 16 months of parental leave, for most of which the state pays them most of their previous wages. (The man must take three months, or they are lost; many split the time off equally.) Afterwards, there are subsidised nurseries, and the norm is for both parents to go back to work. Since child-care is everywhere, Swedes find it relatively easy to move cities to find a better job.

"Once in a while a grandparent might pick up a kid from pre-school or babysit, but not always," says Andreas Bergh of Lund university. Rather than allow a daughter to go back to work, grandparents might enable her to go out to dinner with her husband. Grandparental help is "a bonus", says Andreas Heino of Timbro, a think-tank in Stockholm.

A lot on her plate

Subsidies for parental leave are so generous that even entrepreneurs take a fair chunk of it. Sandra Kastås runs two companies in Stockholm. When her son was born in 2021 she took two months off, then spent a year working half-time, as did her husband, an IT specialist. Despite her hectic schedule, Mrs Kastås expects no regular help from her parents. They live on Gotland, a remote island, and do not visit often. Her mother "shows her love by sending gifts", such as books and jumpers she has knitted. She talks to her grandson, on FaceTime. "He hugs the phone when she calls. It's cute," says Mrs Kastås.

Most Swedes are happy with their system. But some of the elderly complain of loneliness. Nearly half of Swedish households consist of one person, the highest level in Europe after Finland. In a population of 10.4m, some 900,000 people are over 60 and living alone. Of these, a fifth are considered socially isolated, meaning they do not meet friends or family more than twice a month. During the pandemic, Swedes joked darkly that it would be easy to isolate the elderly because "We don't visit our grandparents much anyway." Immigrants from places such as Africa or the Middle East are often shocked at how atomised Swedish families are.

Lars Tragardh, a historian, praises Sweden's "statist individualism". The state looks after people as individuals, so they can make their own choices and not have to rely on others, he says. Parents elsewhere envy the help that their Nordic peers receive, despite the higher taxes needed to pay for it. Still, even the most generous welfare state cannot offer love.

Helena Paues, who works for an association of local authorities in Sweden, describes how her father enjoys taking her dyslexic son, Wille, to museums. "He loves facts and science. I think his grandfather has taken him to all the museums in Stockholm: the science museum, the Viking museum, and so on. They have a very close bond. My father also struggled with learning to read and write when he was young."

In the summer, the grandkids stay at their grandparents' summer house, swim in the lake, and drink lemonade in a tree house. They clamour to do the same thing every year. Ms Paues says her father instils values such as respect for others. "He doesn't need to talk about it, he does it by being himself. He teaches them that their opinions matter, because he listens to them." She concludes: "As a child, you need more grown-ups than just your parents." ■

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Business organisation

The fuzzy corporation

Digital technology is redrawing the boundaries of the firm

TECHNOLOGY AND business are inextricably linked. Entrepreneurs harness technological advances and, with skill and luck, turn them into profitable products. Technology, in turn, changes how firms operate. Electricity enabled the creation of larger, more efficient factories, since these no longer needed to depend on a central source of steam power; email has done away with most letters. But new technologies also affect business in a subtler, more profound way. They alter not just how companies do things but also what they do—and, critically, what they don't do.

The Industrial Revolution ended the "putting-out system", in which companies obtained raw materials but outsourced manufacturing to self-employed craftsmen who worked at home and were paid by output. Factories strengthened the tie between workers, now employed directly and paid by the hour, and workplace. The telegraph, telephone and, in the last century, containerised shipping and better information technology (IT), have allowed multinational companies to subcontract ever more tasks to ever more places. China became the world's factory; India became its back office. Nearly three years after the pandemic began, it is clear that technology is once again profoundly redrawing the boundaries of the firm.

In the rich world, fast broadband and apps like Zoom or Microsoft Teams are allowing a third of working days to be done remotely. Jobs are trickling out from big-city corporate headquarters to smaller towns and the boondocks. And the line between collaborating with a colleague, a freelance worker or another firm is blurring.

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Companies are drawing on common pools of resources, from cloud computing to human capital. By one estimate, skilled freelance workers in America earned $247bn in 2021, up from about $135bn in 2018. The biggest firms in America and Europe are outsourcing more white-collar work. Exports of commercial services from six large emerging markets have grown by 16.5% a year since the pandemic began, up from 6.5% before it (see chart on next page). On January 9th Tata Consultancy Services (TCS), an Indian IT-outsourcing giant, reported another bump in profits.

A useful lens for understanding these changes was offered by Ronald Coase in his paper from 1937 entitled "The nature of the firm". Stay small and you forgo the efficiencies of scale. Grow too big and an enterprise gets unwieldy—think of Soviet-style command-and-control economies. Most commerce happens in between those extremes. Coase, whose insights earned him a Nobel prize in economics, argued that firms' boundaries—what to do and what not to do yourself—are determined by how transaction and information costs differ within firms and between them. Some things are done most efficiently in-house. The market takes care of the rest.

▸▸

For example, between the 1980s and the 2010s, globalisation and the IT boom boosted economies of scale, which encouraged market concentration. But they also increased competitive pressures and cut the cost of communication and collaboration between firms. The net result was for many companies to shrink their scopes. In research published last year Lorenz Ekerdt and Kai-Jie Wu of the University of Rochester found that the average number of sectors in which American manufacturers were active fell by half between 1977 and 2017. By the 2000s many sprawling industrial conglomerates like Germany's Degussa, which had a hand in everything from metals to medicine, or British Aerospace, which was poking at cars, had untangled themselves and picked the knitting to stick to (chemicals and aircraft, respectively).

Today Coasean forces are ushering in a new type of corporate organisation. It resembles a 21st-century putting-out system—not for artisan craftsmen but for the white-collar professionals who epitomise modern Western economies. Micha Kaufman, boss of Fiverr, an Israeli marketplace which matches freelances with business around the world, observes that firms are getting better at measuring workers' performance based on their actual output rather than time spent producing it. This is true both of employees and subcontractors. The result is a reorganisation of businesses both internally, and in relation to other companies in the economy.

Start on the inside. Using data from America's Quarterly Census of Employment and Wages, *The Economist* has examined jobs in three sectors particularly compatible with remote work: technology, finance and professional services. We find that such jobs have become far more distributed across America since the pandemic. Big metropolitan areas have lost out to smaller cities and even the countryside. Since the fourth quarter of 2019, the number of jobs in the three sectors has grown by six percentage points more in rural areas than in San Francisco and New York.

Firms are also distributing more work across borders. Oswald Yeo, who runs Glints, a recruiting startup in Singapore, says his firm hires employees in batches by country. That helps the new recruits to form in-person bonds with compatriots, while expanding Glints's talent pool, Mr Yeo explains. There is a premium for places with a small time difference. In Glints's case, that is countries like Indonesia.

For American firms, it is often Canada. Microsoft, which opened its first Canadian office in 1985, created a big new one in Toronto in 2022. Google is tripling its Canadian workforce to 5,000. A study last year by CBRE, a property firm, of the 50 cities in America and Canada with the most tech workers found that four of the top ten were Canadian. Together, the four added 180,000 tech jobs between 2016 and 2021, an increase of 39%, while the top four American cities gained just 86,000 jobs, or 8%. Lower living costs help; the Canadian quartet were among the 16 cheapest cities in the group in terms of housing.

Barriers to immigration are another factor forcing firms to look abroad, says Prithwiraj Choudhury of Harvard Business School. Mr Choudhury has documented a growing class of firms that help employers forge stable relationships with foreign employees without hiring them directly. One example is MobSquad, a firm that enlists skilled workers unable to obtain visas to America and employs them in Canada instead. Its American clients include Betterment, an investment firm, and Guardant Health, a biotechnology company.

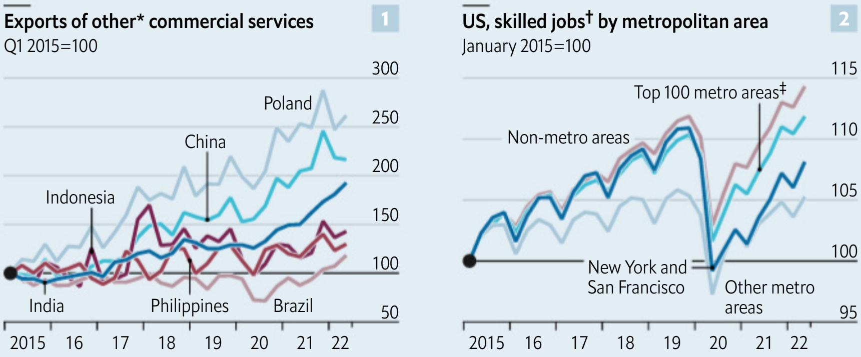
MobSquad's recruits sit somewhere between outsourced temps and full-time employees. This sort of arrangement points to the bigger Coasean shift—to how firms demarcate which tasks they perform on their own account and which they subcontract.

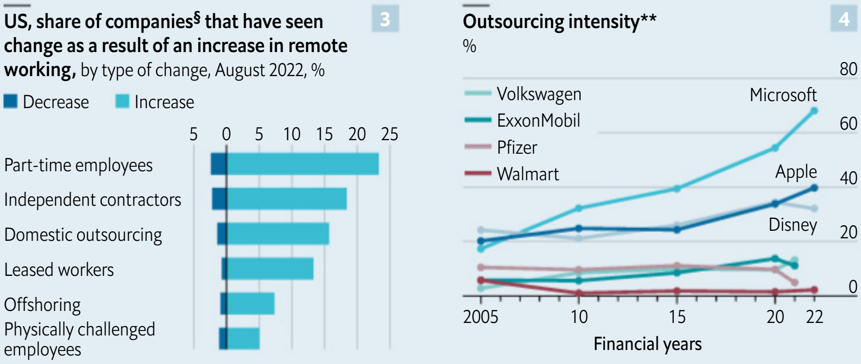
A survey of nearly 500 American firms by the Federal Reserve Bank of Atlanta last year found that 18% were using more independent contractors than in previous years; 2% said they used fewer. On top of that, 13% relied more on leased workers, compared with 1% who reduced this reliance. MBO Partners, a workforce-management firm, estimates that the number of American workers engaged in independent work for at least 15 hours a week increased from 15m in 2019 to 22m in 2022. Figures from the Bureau of Labour Statistics are more conservative, but still show that nearly 1m more Americans are self-employed than at the start of 2020. Pandemic-era job losses forcing people into less desirable work arrangements cannot be the whole story; a similar surge in self-employment did not occur after the global financial crisis of 2007-09.

The shift is again made possible by technology, notably the spread of platforms for freelance work. Having grown slowly, from 9% of America's labour force in 2000 to 11% in 2018, self-employment is becoming more common. Gig work is no longer just about ride-hailing or food delivery. Whereas earlier platforms, such as Taskrabbit, focused on routine tasks, emerging new ones recruit freelances for complicated work. Upwork specialises in web development; Fiverr is known for media production. Amazon turned to Tongal, another freelancing platform, when it needed a team to rapidly produce social-media content for its Prime TV shows.

Besides making it easier to tap non-employees, technology is enabling companies to collaborate more seamlessly with other ▸▸

Peripheral vision





*Services not related to transport, travel or goods †Technology, finance and professional services ‡Excluding New York and San Francisco §483 companies surveyed **Purchase commitments in forthcoming year as % of cost of revenue

Sources: WTO; QCEW; Census Bureau; Atlanta Fed Survey of Business Uncertainty; company reports; *The Economist* businesses. In 2020 Slack, the messaging platform of choice in many a workplace, launched a feature that lets users communicate with outside firms as they would within their own organisations. More than 70% of the *Fortune* 100 list of America's biggest firms by revenue use the feature. The Atlanta Fed's survey found that 16% of responding firms had increased domestic outsourcing and 6% had offshored more. Already, combined revenues for six big IT-services firms with large operations in India—Cognizant, HCLT, Infosys, TCS, Tech Mahindra and Wipro—grew by 25% between the third quarter of 2019 and the same period last year.

Pinning down just how much firms depend on outsiders is tricky—companies do not advertise this sort of thing. To get an idea, Katie Moon and Gordon Phillips, two economists, look at a firm's external purchase commitments in the upcoming year as a share of its cost of sales. As a snapshot of the economy, this measure of "outsourcing intensity" must be treated with caution; it does not capture all types of outsourcing and different firms account for external purchases in different ways. But it usefully illustrates changes over time.

The Economist has calculated the measure using data from financial reports for a sample of large listed firms in America and Europe. They are indeed growing more reliant on others. Average outsourcing intensity in our sample has doubled from 11% in 2005 to 22% in the most recent year of data. This growth is especially pronounced among tech titans such as Apple and Microsoft; businesses that grew more slowly, such as Walmart, a retailing giant, saw small increases. This is consistent with research which finds that as firms grow larger and adopt more technologies, thus becoming more complex and unwieldy, they outsource more operations—precisely as Coase would have predicted.

As technology evolves further, so will the contours of the firm. Companies may gain more flexibility to seek out new workers for new tasks in new places. Portugal has created a visa for digital nomads, who will be able to work from the country for a year. Argentina wants to introduce a preferential exchange rate for freelance workers selling their services abroad: the "tech dollar" would ensure that they were not exposed to the rapidly devaluing peso.

For Western white-collar types, stiffer competition for jobs may compress pay. According to a working paper published last year, by Alberto Cavallo of Harvard Business School and colleagues, wages differ less between countries for occupations that are more prone to outsourcing. That means higher living standards for workers in poorer countries and, possibly higher profits for their employers. And for Coase, it means continued relevance. ■

Global commerce

Shipping forecast

SINGAPORE

The world's logistics giants are betting that the future of trade is more high-tech—and more Asian

DRIVERLESS VEHICLES whizz across five new berths at Tuas Mega Port, which sits on a swathe of largely reclaimed land at the western tip of Singapore. Unmanned cranes loom overhead, circled by camera-fitted drones. The berths are the first of 21 due by 2027. When it is completed in 2040, the complex will be the largest container port on Earth, boasts PSA International, its Singaporean owner.

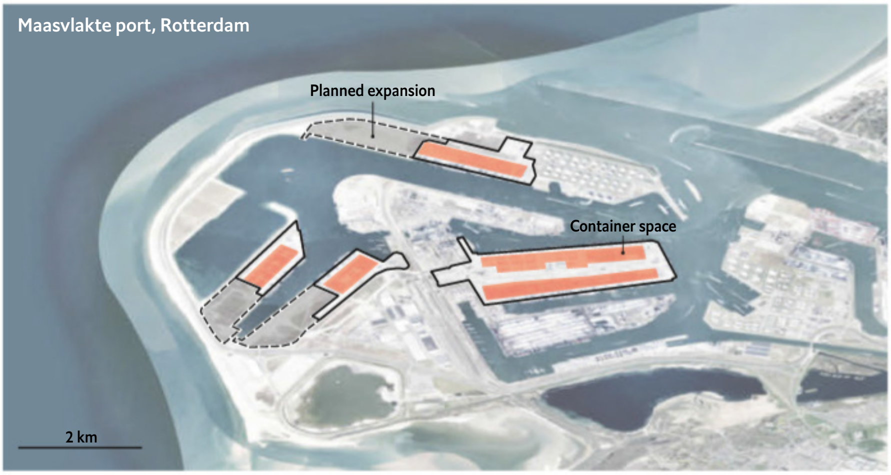
Tuas is a vision of the future on two fronts. It illustrates how port operators the world over are deploying clever technologies to meet the demand for their services in the face of obstacles to the development of new facilities, from lack of space to environmental concerns. More fundamentally, the city-state's investment, with construction costs estimated at $15bn, is part of a wave of huge bets by the broader logistics industry on the rising importance of Asia, and South-East Asia in particular. The IMF expects the region's five largest economies—Indonesia, Malaysia, Singapore, the Philippines and Thailand—to be the fastest-growing bloc in the world by trade volumes between 2022 and 2027. The result is that the map of global commerce and the blueprints for its critical nodes are being simultaneously redrawn.

Across the planet, the expansion of seaports is becoming tougher, notes Jean-Paul Rodrigue, a professor of transport geography at Hofstra University in Long Island. Space in the right locations is scarce. Critics of development, especially among environmentalists, are not. Last year a big port expansion in Piraeus, Greece, was blocked by courts for failing to provide the right assessment of its environmental impact. One in Veracruz, Mexico, was also stopped on environmental grounds.

One solution is to make existing logistics networks more efficient rather than merely larger. In April PSA finalised its purchase of BDP International, an American freight-forwarder specialising in supply-chain management, for an undisclosed sum (its previous private-equity owner had reportedly been looking for $1.5bn). Over the past two years DP World, an Emirati port operator, has bought two supply-chain specialists: Imperial Logistics, a South African firm, for $890m and Syncreon, an American one, for $1.2bn.

Streamlining supply chains only gets you so far, however. At some point, new capacity will be needed. One way to achieve it is by reclaiming land from the sea. This requires feats of civil engineering—and is expensive. Singapore's Maritime and Port Authority spent around $1.8bn on filling in the sea with earth for the first stage of the new Tuas facility. The massive Maasvlakte expansion, the second leg of which opened in 2015, has so far cost the Port of Rotterdam, an enterprise jointly owned by the Dutch state and the city government, around €2.9bn ($3.1bn).

Many ports are too deep for land reclamation to be viable. Some are therefore deciding to build upwards. In conventional set-ups, it is impractical to stack more than six containers on top of each other, and even then tall stacks require boxes to be shuffled around constantly to get hold of the right one. The shuffling can take more time than actually moving containers



around the port and onto vessels, says Mathias Dobner, chief executive of BoxBay, a joint venture between DP World and SMS Group, an engineering firm. In BoxBay's "high-bay" storage system each container sits in an individual rack, where automated cranes can pluck them out individually. In Dubai's Jebel Ali Port, run by DP World, this allows containers to be stacked 11 high.

If you cannot build out or up, another option is to build elsewhere. That explains the rising popularity of inland "dry ports", where goods are put in containers ahead of time, ready to be loaded onto ships as they arrive at the pier without needing to be stored for days at the port itself. This also lightens road congestion at the terminals. Around 150km (90 miles) from California's coast, in the Mojave Desert, Pioneer Partners, an investment firm, has secured land and permits for such a facility, to ease traffic at the hopelessly inefficient ports of Los Angeles and Long Beach.

In 2016 PSA entered a joint venture with Chinese state-owned rail operators to run a network of dry ports in China. Manufacturers load goods onto trains at one of 13 inland rail terminals for transport to the coast. Some of these terminals are rather a long way from any shoreline. Urumqi in Xinjiang province, home to one of them, is farther from the sea than any other city in the world, around 2,400km from the Bay of Bengal. In 2022 the International Finance Corporation, the private-sector arm of the World Bank, signed an agreement with another Singaporean logistics firm, YCH Group, and T&T Group, a Vietnamese conglomerate, to develop a $300m inland container depot in Vinh Phuc, in northern Vietnam. The project, known as Vietnam SuperPort, will begin operations in 2024, providing some welcome relief in a country where exports have risen far more rapidly than inland logistical investments.

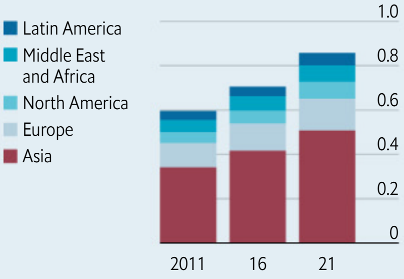
All the dry-port development in Asia points to the second force reshaping the ports business: the shift of its centre of gravity eastwards. For decades Asian trade has tended to be one-way. Containers loaded with goods manufactured by the continent's cheap labour sailed to advanced economies and came back largely empty. In the late 1990s more than 70% of Asian exports by value went to other parts of the world. A quarter of a century on, thanks in part to those trade flows and more complex supply chains, Asian economies have become big markets. Today nearly 60% of Asia's exports flow within the region.

The logistics industry is, like PSA with Tuas, making a long-term wager that this share will grow. Logistics investments grew everywhere amid the pandemic surge in e-commerce. In Asia they ballooned. CBRE, a property consultancy, forecasts that Asia (including China) will account for 90% of the growth in global online shopping between 2021 and 2026. That will require up to 130m square metres of new logistics real estate.

The trade winds blow east

Worldwide port container throughput

TEUs*, bn



Source: Drewry Maritime Research

*Twenty-foot equivalent units

A boom in investment in warehouses for storage and hubs for distribution and fulfilment in the region is already under way. Last year GLP, a Singaporean investment firm specialising in logistics real estate, announced a $1.1bn fund focusing on Vietnam and a $3.7bn one focused on Japan. Its sixth China fund, worth $1bn, closed in early November. India is likely to get a boost as global manufacturers look to diversify their production away from China. The ports business of India's richest tycoon, Gautam Adani, operates Mundra Port in Gujarat, the country's largest, and 12 other ports and terminals across seven Indian states. Their combined annual cargo volumes have surged from 200m tonnes three years ago to 300m in 2022. Mr Adani is aiming for 500m tonnes by 2025.

Anchoring expectations

Investments by shipping giants are pointing in the same eastward direction. In October, while global shipping rates were plunging as the effects of pandemic-era bottlenecks eased, Mediterranean Shipping Company (MSC), the world's biggest by total capacity, announced five new intra-Asian services. Three months earlier MSC had announced a $6bn joint venture with the government of Ho Chi Minh City to build a port there by 2027. It will be Vietnam's largest port on completion. In August A.P. Moller-Maersk, MSC's biggest rival, completed the $3.6bn purchase of LF Logistics, a Hong Kong-based firm focusing on intra-Asian trade. The deal brought 223 warehouses and 10,000 employees across the continent under the Danish shipping giant's banner, with an explicit focus on Asian consumers.

When seaborne trade boomed last century, investments in logistics reflected shifts in the global patterns of production and consumption. They are doing so again. And this time the future looks leaner, smarter—and more eastern. ■

Supply chains

The costs of transparency

BERLIN

German firms must clean up their supplier networks, or else

PETER BOKELMANN has had a busy few months. The chief counsel at Trumpf, a maker of machine tools, oversees the firm's efforts to comply with the new law on the due diligence of supply chains that came into force on January 1st. Mr Bokelmann has been at it since the law was passed in mid-2021. "The enormous effort needed is underestimated," he sighs.

No kidding. Many German businesses are only waking up to the new rules, which require those with more than 3,000 employees in Germany to monitor whether their suppliers around the world meet human-rights and environmental standards. From 2024 the law will extend to firms with 1,000 German workers. Misbehaviour by suppliers could lead to fines of up to €8m ($8.6m) or 2% of the German firms' global sales, whichever is higher. Bosses warn this puts their firms at a disadvantage, creates more red tape in a country that already has tangles of it, and could harm not help workers in emerging markets. The law is "well meant, lousily done", sums up the VDMA, the mechanical-engineering industry's main lobby group.

Germany is not the first member of the EU to enact such a law. But the German statute is more stringent and applies to more companies than, for example, its French or Dutch equivalents. The government's own estimates of the law's direct cost to the country's firms in time and toil—€110m this year and €43.5m a year thereafter—are unrealistically low, businesses say.

In Trumpf's case, of its 15,000 suppliers, 5,000 are deemed by the firm to be low-risk. Of the remaining 7,000, Trumpf has so far evaluated 800; assessing the rest will be a multi-year effort, says Mr Bokelmann. And that may not be the end of it. In October the Federal Office for Economic Affairs and Export Control, which is in charge of supervising implementation, sent out a 35-page questionnaire to businesses with 437 data fields, including for details not specified in the law. Moreover, civil-society activists want the German government to push for even stricter EU-wide legislation.

Tougher EU rules are already in the works. They would require firms with 500 employees or more and annual sales of €150m to monitor environmental and labour standards across their supply chains, and to ensure their business is compatible with the decarbonisation path envisaged by the Paris agreement on climate change.

In industries such as farming or textiles, where mistreatment of workers is more common, the EU law would apply to companies with just 250 employees and sales of €40m. It is likely to go before the European Parliament and the European Council this year. German firms would then need to comply with both domestic and EU rules, adding a layer of cost and complexity.

A company such as Trumpf, which has over 16,000 employees worldwide and €4.2bn in annual sales, just about has the resources to deal with the attendant headaches. For Germany's smaller pocket multinationals, the easiest way to comply is by leaving developing countries with a poor record on human rights and environmental standards, reckons the Kiel Institute for the World Economy. The German-African Business Association opposes the law for that reason. ■

Expensive cars

High-performance motoring

The fanciest vehicles are selling fast

PRICEY AUTOMOBILES are impressive on paper and on the road. For their makers, they also often leave a good impression on the income statement. Global car sales in 2022, at around 79m vehicles, are below the level of a decade ago. Yet demand for fancier sets of wheels costing more than €100,000 ($107,000) grew by around 6.5% a year over the same period, according to Bernstein, a broker.

Last year the surge was particularly pronounced for the most exclusive motors. Whereas 1.3% fewer cars were sold in 2022 than the year before, according to S&P Global, a consultancy, on January 9th Rolls-Royce said that it had sold 8% more of its ultimate automotive status symbols last year. Ferrari, the Italian manufacturer of rich persons' playthings (whose biggest shareholder, Exor, also part-owns *The Economist*'s parent company), may do even better. Between January and September Ferrari sold 20% more cars than in the same period the year before.

The pair dominate a tiny but profitable niche. Rolls, owned by Germany's BMW, sold more than 6,000 cars last year—a record. In 2021 it supplied well over half the world's cars costing over €250,000, reckons Bernstein. Ferrari's share was more than a third. Lamborghini, an Italian sportscar firm owned by Volkswagen (VW), accounted for most of the rest. The two Italian marques are going strong in the €150,000-250,000 bracket, which is dominated by Porsche (spun off from VW last year to become one of the world's most valuable carmakers). On January 10th Bentley, a VW-owned powerhouse in that (slightly) less ostentatious segment, said it had sold more than 15,000 vehicles for the first time in 2022, 4% more than in 2021.

Rolls does not dirty its hands with such proletarian rides. Bespoke elements—extravagant paint jobs, sumptuous leather-and-wood interiors, champagne chests to match—have pushed the average selling price of a Roller above €500,000. Each generates vast profits. True to the discretion prized by its customers, the firm won't say how much profit; it may be more lucrative than Ferrari, which boasts a rich operating margin of around 25%. Even Porsche's 15% or so, let alone around 10% for all premium carmakers, looks skinny by comparison.

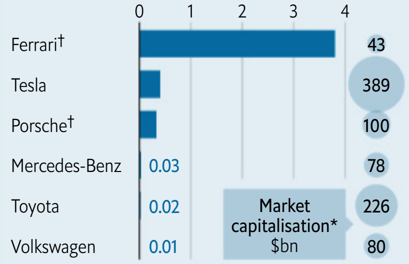
Ferrari's market capitalisation of $43bn makes it the world's 11th-most-valuable listed car firm. In terms of market value per car sold, it is miles ahead of the pack (see chart). Rolls would be, too, were it an independent company. Both have skilfully manoeuvred the luxury-goods market, keeping supply in check and prices high.

Now both companies must navigate the industry's progressing electrification. This poses different challenges to each. Even run-of-the-mill EVs are lightning-fast, dulling part of Ferrari's appeal, and offer a smooth and silent ride, which distinguished Rolls's engines in the petrol era. For Rolls, which will start shipping its first EV, the Spectre, in late 2023, quiet electric motors are at least on-brand. Ferrari, whose throaty roar is part of the attraction, faces a more delicate task. Its engineers are doubtless hard at work ensuring that its debut full EV, expected by 2025, handles like a racing car despite a heavy battery. ■

Wheels of fortune

Market capitalisation* per vehicle produced

2021, $m



Sources: Refinitiv Datastream; company reports

*January 11th 2023
†Per vehicle delivered

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Indian business

Skyfall

MUMBAI

A lurid incident on an Air India flight triggers outrage—and introspection

MOST IN-FLIGHT horror stories, of which passengers everywhere experience too many, elicit a scripted apology from the airline or its chief executive. Then it is back to business; aggrieved travellers are left to stew. An incident in November on an Air India flight from New York to Delhi is playing out differently. On January 11th a court in the Indian capital heard a case of a 34-year-old man arrested for urinating while intoxicated on a 72-year-old female fellow business-class passenger. The man blamed the act on alcohol and told the court he had no memory of it when the cabin crew woke him and asked him to apologise, which he did. His bail request was nevertheless denied.

India is full of stories of well-connected individuals escaping punishment for untoward actions. A brief spark of outrage is followed, sometimes, with a promise of an investigation that, if it happens, tends to be dragged out and soon forgotten. This case fitted that script—until late December, when a letter from the victim reached Natarajan Chandrasekaran, chairman of Tata Sons, the conglomerate that bought Air India from the government in 2022. The letter, which has been seen by *The Economist*, began innocently enough: "I am writing to express my deep disappointment regarding the appalling incident that occurred during my business-class trip."

Then came the lurid details. After the lights were dimmed she was confronted by the inebriated passenger, and sought help from a crew who lacked the ability or the capacity to respond. She recounts being told to return to her original seat (not next to the offender's), which had been covered with sheets but still felt damp and smelled of urine. Another passenger pleaded for her to be upgraded to an empty first-class seat, to no avail.

This sparked a reckoning, starting at the airline's parent company. Mr Chandrasekaran called the incident "a matter of personal anguish for me". The flight's captain and four crew members were suspended. The offender, an Indian employee of Wells Fargo, an American bank, was sacked from his job. Delhi police tracked him to Bangalore using mobile-phone data. He was arrested on January 7th and has been held in pre-trial detention. Outrage has spilled onto newspaper pages and TV screens. The aviation minister weighed in, telling reporters, "Further action will be taken speedily after the completion of the ongoing proceedings."

There may be a silver lining. Any passenger tempted to misbehave on a flight in the future may think again (including about consuming so much booze as to render them thoughtless). For Tata and Air India, the public-relations disaster has made it clear that turning around the flag carrier, diminished by decades of government mismanagement, will require instilling a new culture. Buying new aircraft and hiring new managers is one thing; shaking up encrusted union work rules that have for decades dulled staff initiative is something else entirely. As India's most respected business house, Tata could pull it off. And where it leads, the rest of Indian business may follow. ■

Bartleby Unlocking creativity

Forget drug use and hammocks. Try tedium instead

Academics do not contend to write the most entertaining research paper of the year. But Yu Tse Heng, now at the University of Virginia, Christopher Barnes of the University of Washington and Kai Chi Yam of the National University of Singapore should take a bow nonetheless. In a study published in 2022, the trio tested the widespread notion that cannabis increases creativity.

The researchers recruited a bunch of Americans who take the drug recreationally, and asked them to take some standardised tests of creativity (from thinking of novel uses for a brick to coming up with money-spinning ideas for a music band). Some participants underwent the test immediately after taking cannabis; a control group only did so if 12 hours had elapsed since they last indulged. Independent evaluators assessed the innovativeness of their ideas.

The researchers found that cannabis increased users' joviality, which is thought to encourage lateral thinking. Drug use also led people to rate their own creativity, and that of other participants, more highly. The problem is that the independent assessors could discern no effect on the actual quality of people's thoughts. Cannabis users got high and duly found everything mind-blowing, regardless of whether it was or not. "Leaders may want employees to be sober, especially while evaluating ideas" is one of the paper's dry conclusions.

You might think that doesn't need saying. But the search for ways to unleash creativity seems to scramble executives' brains. There is rising interest in the use of psychedelics in the workplace, not simply as a health-care perk but also as a way of stimulating innovative thinking. But before you submit your book pitch for "The Smartest Guys on the Mushroom", take a minute. A study published last year in *Nature*, a scientific journal, tested the effects of taking low doses of psilocybin and reached a similar conclusion to the cannabis paper: participants may have gone on a trip but there wasn't much evidence to suggest it ended in a creative destination.

Drug use is at the extreme end of a range of techniques whose purpose is to jolt people into a more innovative mindset. There are specific exercises designed to encourage "divergent thinking", such as sketching the person next to you or designing a unique sandwich (how about tripe and a dash of sour grapes?). There are team-building activities, from plate-spinning and karaoke to escape rooms and fire-walking (safety warning: if you have a brainwave during this exercise, never stop to write it down).

And there is a near-universal obsession with turning bits of offices into playrooms: brightly coloured furniture, hammocks, blackboards, chairs that are far too low to the ground for adults. The idea is that using an unconventional space can help stimulate innovative thoughts. But much depends on the task at hand.

In an experiment conducted by Manuel Sosa of INSEAD business school and Sunkee Lee of Carnegie Mellon University, participants were given a sheet of paper with 40 circles on it and asked to draw real-world objects that contained that shape. People who had been put in an unconventional workspace performed worse than those in a bog-standard office because they became fixated on the circular objects in their vicinity (they did better than cubicle-dwellers on tests that could not be influenced by their surroundings in this way).

Group activities undoubtedly have their place: it's called hell. But desperate efforts to induce creativity can be self-defeating, in the same way that telling yourself that you must get to sleep is bound to keep you awake. Plenty of evidence suggests that doing absolutely nothing is a better option. Allowing the mind to wander is a good way to unlock bright ideas. Aaron Sorkin, a celebrated screenplay writer, showered multiple times a day as a way of getting around writer's block.

Tedium itself can be a useful spur to inspiration. In a study presented in 2013 researchers found that people who had copied telephone numbers out—or, even better, just read them—before taking a creative test outperformed those who had not. Boredom, reckoned Friedrich Nietzsche, is that disagreeable "windless calm" of the soul that precedes a happy voyage and cheerful breeze. There is nothing like boredom to make you write, agreed a young Agatha Christie. Maybe she could have achieved much more if she had a beanbag, some Lego and a zoot. Or maybe creativity is just a bit less formulaic than that.

Schumpeter | Not green but clean

Lessons for liberals from Texas's climate-sceptic wind ranchers

For more than 140 years John Davis's family has owned the Pecan Spring Ranch on the prairie lands of West Texas. He has a photo of his great-great-grandmother, known as "the sheep queen of Texas", sitting in a horse-drawn carriage beneath a tree that still stands in front of the hay barn. It's a tough business to maintain, even with a valuable herd of Wagyu beef cattle to raise. Yet when a renewable-energy developer offered Mr Davis a large payment to put wind turbines on his land, at first the staunch Republican—and former state congressman—turned it down.

His opposition was knee-jerk. "Clean energy has been branded a liberal technology. People literally say, 'this is AOC coming into town,'" explains his son, Samuel, referring to Alexandria Ocasio-Cortez, the left-wing congresswoman whose name pops up with almost flattering frequency among conservative Texans. Eventually, though, economic sense prevailed. As the family points out, at an average return per acre, cattle generate $8, deer hunters $15—and wind hundreds of dollars. It assures the ranch's future.

Now hosting seven turbines, the family embraces renewables as religious converts would. Samuel is a representative for the Texas Land and Liberty Coalition, which promotes wind and solar energy among ranchers. His parents have bought a filling station, ripped out the petrol pumps, and are converting it into an electric-vehicle charging station (with a farmers' market on the side). Your columnist sat down with the clan last month over a breakfast of quiche and tomato-jalapeño jam, before bouncing across their ranch in an electric buggy. He learned lessons about clean energy that challenged his own philosophical assumptions.

The first is that you do not have to believe in climate change to support renewables. Quite the opposite. For a portion of conservative America, things like climate change and carbon taxes are still viewed as big-government malarkey. Even greenery is despised as a term co-opted by the left. "When someone says we are embracing green energy, it's like shoving an ice pick through our ears," says Matt Welch, head of Conservative Texans for Energy Innovation, another pro-renewables group. "We just say clean energy."

This is not just Texan recalcitrance. Wind power is abundantly harvested in states run by Republican governments and over land owned by climate-sceptic ranchers. The message they prefer is a more free-market one: that wind and solar are increasingly competitive sources of energy, help reduce electricity costs, foster entrepreneurship, and are no less American than oil and gas.

It is a surprisingly effective mantra. You might think that California, which talks a good game about climate change and green energy, is on the forefront of renewables development. But Texas is far ahead. According to a study commissioned by Mr Welch's organisation, in the second quarter of 2022 his home state had three times more wind, solar and battery storage under construction than California. The Energy Information Administration, a federal agency, predicts that this year the share of renewables in Texan power generation will for the first time exceed that of natural gas.

That helps explain the next lesson. For all the mockery of AOC, it is from their own Republican ranks that wind-energy ranchers face the most antagonism—especially from fossil-fuel producers who fear being undercut by renewables. Organisations like the Texas Public Policy Foundation (TPPF), which lobbies on behalf of oil and gas, and the Texas Landowners Coalition, backed by right-wing beneficiaries of the fracking boom, are fighting tooth and nail to curb wind development. The TPPF's battle extends to proposed offshore wind farms as far away as New England.

Jason Isaac of the TPPF says his organisation helped convince the Texas government to let a school-district tax credit lapse on December 31st that encouraged renewables investment in rural Texas. He argues that such fiscal support distorts the power market, though that stance ignores other incentives for oil and gas producers. He blames wind for the blackouts across Texas in 2021 caused by storm Uri, never mind that an official report concluded that "all types of generation technologies failed", including natural gas and coal. Republicans accuse liberals of "cult-like decarbonisation", yet their policies hurt some fellow conservatives.

The third lesson is pragmatism. Even though Republican lawmakers unanimously opposed President Joe Biden's Inflation Reduction Act (IRA), which provides hundreds of billions of dollars to curb America's use of fossil fuels, red states like Texas plan to lap it up. The Davis family do not support the IRA, but they hope its expanded federal tax credits will entice more wind and solar to rural Texas. The state also expects to attract big hydrogen and carbon-sequestration projects. Other Republican states like Alabama, Georgia, South Carolina and Tennessee are welcoming billions of dollars of clean-energy investments spurred by the IRA. Even conservative businesses that lobby strongly for fossil fuels hope to benefit from the energy transition. For example, Koch Industries, an energy conglomerate, supported a big investment by Freyr, a Norwegian firm, in a battery factory in Georgia that will benefit from the law.

Don't waste your breath

The upshot is that there are ways to promote clean energy that do not rely on convincing climate sceptics that they are bonkers. A better sales pitch may be to play up the cost advantages of renewables rather than the climate benefits, emphasise their contribution to cutting air pollution rather than carbon emissions, and acknowledge that, owing to intermittency factors, natural gas may have a role to play in power generation for years to come. As Michael Webber, a professor of energy at the University of Texas, puts it, "It's not unusual for Texas to do the right thing for all the wrong reasons." In the end, everyone's aim is a better future. As the elder Mr Davis says, many ranchers lucky enough to have oil under their land have benefited for generations. "We struck wind." ■

Finance & economics

The wrong competition

Protectionist turns

SINGAPORE AND WASHINGTON, DC

America has fired the starting gun on a global subsidy race

STEP FOR a moment into the ancient past. The year is 2016. Michael Froman, the United States Trade Representative, is making a stirring call to arms. American workers and businesses are competing against firms that get subsidies and other favours from their governments. "The question", he says, "is what do we do about it? Do we accept this status quo, or do we actively work to change it?" Mr Froman's choice, in line with decades of his country's trade policies, is the latter: try to tear down the subsidies hurting American exporters and gumming up global trade.

Now, return to the present—with a thud. America's answer to Mr Froman's question has been flipped. Rather than trying to get other countries to cut subsidies, the Biden administration's unabashed focus is on building a subsidy architecture of its own, complete with the kinds of local-content rules that American officials once railed against. Thanks to landmark legislation on semiconductors and greenery passed last year, the government is poised to shower $465bn on chips and climate technology. Officials have started getting into the nitty-gritty of how to distribute the money; some of the new rules went into effect on January 1st.

For many in Washington—both Democrats and Republicans—this new approach is common sense. It is, they believe, the only way that America can protect its industrial base, fend off the challenge from a rising China and reorient the economy towards greener growth. But for America's allies, from Europe to Asia, it is a startling shift. A country that they had counted on as the stalwart of an open-trading world is instead taking a big step towards protectionism. They, in turn, must decide whether to fight money with money, boosting their subsidies to counter America's. If the result is a global subsidy race, the downsides could include a fractured international trading system, higher costs for consumers, more hurdles to innovation and new threats to political co-operation.

The first big crack in America's commitment to free trade came when Donald Trump levied tariffs on products from around the world. In some ways, though, it is this second crack—the present ratcheting up of subsidies—that hurts more. "Free trade is dead" is the blunt assessment of a senior Asian diplomat in Washington. "It's basic game theory. When one side breaks the rules, others soon break the rules, too. If you stand still, you will lose the most."

Although subsidies have long been part of America's economic landscape, the new plans are notable for both their scale and their America-first emphasis. Putting an exact price tag on them is impossible because most of the subsidies will come in the form of tax credits, the total size of which will depend on how much companies produce. Yet the cumulative impact will be enormous. If calculations include infrastructure spending, the federal gov-

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ernment's investment spree may reach $100bn a year over the next decade—roughly twice as much as total subsidies in the pre-pandemic decade. Credit Suisse, a bank, thinks that American solar panels could wind up the cheapest in the world by the late 2020s.

To advocates of free trade, subsidies are bad in their own right: they make goods produced by one country artificially cheaper, reducing economic efficiency. America's new subsidies are that much more objectionable because in many cases they require recipients to meet local-content thresholds. To obtain a $7,500 credit towards their purchase of an electric vehicle, consumers need to buy a car assembled in North America. At least half of the battery components in eligible cars must also be made in North America. Wind, solar and geothermal projects will all receive heftier subsidies if they use American steel and iron. Roughly half of their manufactured components must also be made in America. And so the list goes on.

Killing me lavishly

America's protectionist turn has numerous motivations. China's ascendancy is the starting point. American leaders once believed they could get China to rein in the worst of its industrial policies. These hopes were dashed, giving way to the view that America needs its own industrial policies to avoid becoming reliant on a rival in the technologies of tomorrow. Politicians' concerns about disruption to supply chains early in the covid-19 pandemic strengthened this view, as did a desire to boost middle-class jobs. Climate change is another reason: spending on renewable energy is expected to lead to a sharp reduction in America's carbon emissions.

The economic thinking that underpins much of this logic is dubious. Yet its political momentum is, for the time being, inexorable. That gives rise to two critical questions for countries around the world. How big an economic threat are the American subsidies? And how should they respond?

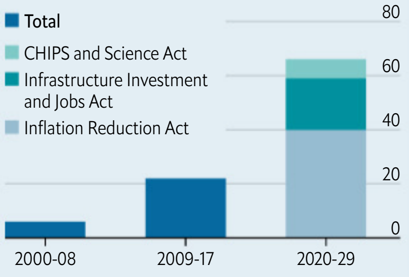
As the main target of America's measures, the answers for China are straightforward. Coupled with export controls and sanctions, America's subsidies are designed to draw business from China. This reinforces the Chinese government's commitment to greater self-reliance, including through its own vast industrial subsidies.

For America's friends, though, the answers are more complicated. When Joe Biden signed America's green-tech subsidies into law in August (via the Inflation Reduction Act, or IRA), he was met with praise in Europe. At last America was on board in the fight against climate change. And since everything from cars to supermarkets is bigger in America, Mr Biden going big financially was just seen as the American way of doing things. Not any more. Trade experts in Europe raised the alarm that America's subsidies spell trouble for the continent's green-tech ambitions. Soon enough these concerns percolated up. In December Emmanuel Macron, the French president, called the IRA a "killer for our industry". Criticism from America's allies in Asia has been more muted, but policymakers there are also frustrated by the turn to nationality-based subsidies.

The angrier reaction in Europe is partly because of its weak position. The energy crisis provoked by Russia's war on Ukraine has hit European firms hard. The continent has scrambled to replace cheap piped gas with expensive liquefied gas. With its abundant natural resources, America has an existing advantage in lower energy prices. The new subsidies may give it cheaper renewable power, too. There is anecdotal evidence that Europe is already losing investment. Northvolt, a Swedish manufacturer, is reviewing its plan for a factory in Germany in favour of its existing American operations. Others will follow.

This readjustment is a source of angst, even for some firms. Morris Chang, founder of TSMC, a Taiwanese chipmaker, estimates that manufacturing costs in America are 55% higher than in Taiwan. Work will be duplicated rather than merely distributed differently. The chipmaking giants fret about breaking up networks of expertise in their most advanced manufacturing centres, and surrendering the technological leads that sustain their existence. Research by Boston Consulting Group suggests investment of between $900bn and $1.2trn would be required to create multiple self-sufficient semiconductor supply chains around the world, with annual operational costs rising by between $45bn and $125bn.

At least America's semiconductor subsidies do not have the same local-content rules as its green-tech subsidies. America's allies are now trying to persuade it to soften the latter. President Biden suggests America "never intended to exclude folks who were co-operating with us". Practically, though, it is not easy to recraft the rules. Legislation was written precisely, specifying amounts, timelines and conditions. Congress would need to pass formal amendments—a tall order at the best of times and inconceivable when the House of Representatives is dysfunctional. Any adjustments are thus likely to be minor.



Green giant

United States, federal government spending on climate change, $bn

Annual average

Sources: RMI; Credit Suisse

Telling tales

Governments could in theory take America to the World Trade Organisation (WTO). The WTO's prohibition against subsidies involving local-content requirements is clear. Yet so far there is little appetite for such a challenge. If America were to lose, it could appeal against the ruling, which would in effect bring the case to an end since the WTO no longer has a viable appellate body (thanks to America's decision to block appointments). Another recourse would be to slap tariffs on American exports benefiting from unfair subsidies. That could get very messy. Everything from cars to solar panels and hydrogen to semiconductors would be in play.

Instead, governments elsewhere face an invidious choice about whether or not to join the subsidy race. There is an economic rationale for staying on the sidelines. When America pays for technologies at great cost to its taxpayers, these technologies should, in time, become cheaper for everyone. However much America throws at its companies, it cannot have a comparative advantage in all products. Some officials in Asia cling to the hope that their governments and those in Europe will exercise restraint. "That way all non-Americans could have a level playing field with each other," says a Japanese official.

But the voices calling for more subsidies seem to be prevailing. The South Korean environment ministry has reportedly informed carmakers that domestic subsidies for electric vehicles could be limited to firms which run their own service centres in the country, excluding most foreign companies. Japan is making its own efforts to revive the manufacturing of advanced semiconductors. Eight domestic firms, including Toyota, a carmaker, and Sony, an electronics firm, recently announced the formation of a new chipmaking firm, Rapidus. Then the Japanese government promised ¥70bn ($500m) in funding for the firm's semiconductor research.

In Europe politicians and businesses want strict state-aid rules to be adjusted, so that governments can support industry more lavishly. These rules are one of the European single market's big success stories, helping to ensure competition. Politicians including Bruno Le Maire and Robert Habeck, the economic ministers of France and Germany, and Ursula von der Leyen, president of the European Commission, have argued that changes are needed to let more aid flow to strategic sectors, more quickly. Olaf Scholz, the German chancellor, is reportedly going to join them.

Americans who helped craft the country's old trade strategy worry its new approach will backfire. Susan Schwab, trade representative from 2006 to 2009, argues that many in Europe and Asia will be only too glad to see the doors opened wide to industrial subsidies. "We're never going to subsidise as much or raise as many barriers as our trade partners," she says. "So it's in our interest that there be a rules-based system and that the rules be enforced."

It is an opinion scarcely heard in Washington these days. Katherine Tai, the current trade representative, is a staunch believer in subsidies. She has called for America and its allies to co-ordinate their investments, in order to maximise their clout. Theoretically, this is a sound idea. America wants allies in Asia and Europe to join its harder line on China; its allies, meanwhile, want to continue under America's security umbrella and would like support in confronting climate change.

Yet even with the utmost sincerity, co-ordination is bound to be fiendishly hard. Just as America wants to be at the cutting edge of semiconductor production, so do governments in Asia and Europe. All have national champions, and scores of start-ups vying for a slice of the action. As America and its allies offer more aid, these firms will lap it up. In the process, there will be a duplication of efforts across borders, a waste of public funds and recrimination between countries meant to be co-operating. It may take hundreds of billions of dollars to relearn why America was once an opponent, not an advocate, of subsidies. ■

Buttonwood Everyone's problem

The dollar could bring investors a nasty surprise

OUR CURRENCY, your problem. That is how John Connally, America's Treasury secretary, described the dollar to European leaders in 1971. The phrasing was apt. His boss, Richard Nixon, had suspended the convertibility of the dollar into gold and demanded a change to the exchange-rate system established at Bretton Woods in 1944. Other countries were told to strengthen their currencies, or America would subject them to trade restrictions. Compliance followed in short order. By the end of the year, the Smithsonian Agreement had devalued the dollar by around a tenth against key foreign currencies.

Today's exchange rates are mostly floating, set by the market rather than at crunch talks. Yet once again a weaker dollar is prompting sighs of relief. Last September the DXY, a gauge of the dollar's strength against other currencies, was at its highest in 20 years (see chart). The yen had tumbled; the pound at one point looked like it was racing towards parity with the dollar; the euro spent a few brief spells below it. Since then, the greenback has weakened: measured by the DXY, it is now 10% below its recent peak.

A mighty dollar causes no end of problems. Poorer countries tend to borrow in the currency. When it strengthens, these debts become heftier. Even in rich countries, where governments mostly issue debt in their own currency, a stronger dollar squeezes corporate borrowers. Analysis in 2020 by Matteo Maggiori, Brent Neiman and Jesse Schreger, three economists, showed that in Australia, Canada and New Zealand more than 90% of corporate bonds held by foreigners were denominated in outside currencies, typically dollars.

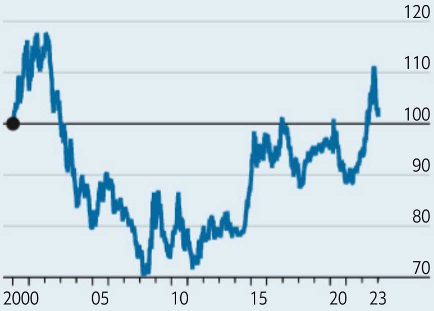
It is not only debtors that suffer. Commodity prices are quoted in dollars; when the currency strengthens they get dearer. American exporters become less competitive, as their products are more expensive for foreigners. American investors with overseas assets have their returns eaten away. Good reason, then, for the cheering at the greenback's retreat.

Unfortunately, the relief may be temporary. To see why, consider the sources of the dollar's recent strength. One is monetary policy. Throughout 2022, America's Federal Reserve raised rates higher and faster than other central banks. This made the dollar a good target for a "carry trade": selling a low-yielding currency to buy a high-yielding one and pocketing the difference. A second source is fear. Russia's invasion of Ukraine, China's unsustainable "zero-covid" policy and the teetering of the global economy towards recession all ratcheted up markets' anxiety levels. In anxious times investors tend to reach for the perceived safety of American assets. A final source is America's economy. In part because of higher energy prices and the country's status as an energy exporter, it seems in better shape than much of the rest of the world's.

A pregnant pause

US dollar trade-weighted exchange rate*

January 1st 2000=100



Source: Refinitiv Datastream

*Against major currencies

True, the pace of the Fed's tightening is slowing, and its governors expect rates to peak this year. But they expect that peak to be higher than investors do, at above 5%, and that it will be maintained longer before being cut. Were the market to accept the central bank's view, the carry trade might yet have another leg. So may the fear trade, which is dependent on the progress of an unpredictable war.

Even an American recession may not dent the dollar. The greenback tends to do well both when America's economy is motoring ahead and when it falls into a downturn, a phenomenon currency traders call the "dollar smile". If American growth is sputtering, the global economy is likely to be in jeopardy as well, enhancing the appeal of dollar assets as havens.

Yet the best argument that the dollar will strengthen is investors' conviction that it won't. In Bank of America's recent survey of fund managers, a near-record proportion thought that the greenback would weaken. Among forecasters surveyed by Bloomberg, a data provider, the median projection is for the dollar to fall against every other major currency this year, and to continue to drop after that.

With some $6.6trn traded against other currencies every day, it is difficult to imagine that at least some of these bets have not already been placed. The more that have, the greater the potential for a rise. Shortly after the Smithsonian Agreement was struck, speculators threw currency markets back into chaos by forcing the dollar to devalue further, eventually breaking the Bretton Woods system altogether. Nowadays, the greatest pain would come if the dollar were driven in the opposite direction. Investors could be in for a shock.

The energy crunch

Good day sunshine

Europe's astonishing run of luck

Visitors to Warsaw at this time of year do not usually bask in temperatures nearing 20°C. Bilbao tends to be frosty, not tropical, in January. But this winter is a strange one. Temperature records are being broken across Europe and energy prices are plummeting: the price of natural gas at the continent's main hub has fallen to levels last seen before the war in Ukraine.

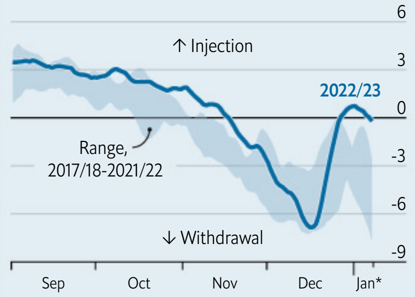
A warm autumn postponed the heating season, allowing gas-storage facilities to be filled to the brim. The present warmth has enabled them to be topped up again (see chart)—a startling turn in the middle of winter. All told, Europe has sucked out half as much gas from storage facilities as at this point in the past two winters. And forecasts suggest a mild end to the season.

The good weather is not the only reason for cheer. Gas supply is growing as new liquefied-natural-gas terminals begin work. A wet autumn and windy winter have helped propel hydro and wind generators. French nuclear plants, turned off for maintenance, are slowly returning to the grid. "The stressors that caused the energy crisis of 2022 are all relaxing at the same time," notes Lion Hirth of the Hertie School in Berlin. Power prices in Europe have fallen back to levels last seen before the summer.

This is providing the continent with an economic boost. Indicators of sentiment have risen for two months in a row. Defying gloomy predictions, German industrial production continues to hold up. Unemployment remains at rock-bottom across Europe, and firms plan to hire more, rather than make job cuts. Forecasters are lifting their growth projections. Goldman Sachs, a bank, no longer sees the euro zone slipping into recession in 2023. In a flashback to medieval times, a change in weather is changing Europe's economic fortunes.

Yet it is still too soon to announce an end to the energy crisis. For a start, prices remain well above normal. Overall power prices are roughly twice what they were in mid-2021. The same gas that costs around €75 ($81) per megawatt-hour today sold for €10 before covid-19. Further drops are unlikely. Gas demand from industry will probably pick up; gas-fired power stations may start to replace coal-fired ones.

And even with bursting storage facilities, Europe is still short of what the International Energy Agency, an official forecaster, reckons the continent will need for a bad winter next year. Asian demand for gas is increasing, and will rise further still as China's economy returns to normality. As Timera Energy, a consultancy, notes, the gas market is still operating on the edge of supply capacity, meaning sharp price movements remain possible.



What crisis?

EU, daily change in gas-storage volume, TWh

Seven-day moving average

Source: Gas Infrastructure Europe

*To January 7th

Europe would do well to bank its luck. Leaders could use the chance to rethink the myriad support schemes they introduced over the summer, many of which are are costly, inefficient and untargeted. They would be wise to focus money on the vulnerable, and to tie it to green investments. After all, it is weirdly hot weather that has given Europe its current reprieve. The fight against climate change will only become more acute as the energy crisis fades. ■

Economics

Downsizing

NEW ORLEANS

Where are the big new ideas?

At the annual meeting of the American Economic Association, held this year in New Orleans, wonks discussed everything from inflation and technological progress to the economics of crime and the energy transition. Yet those looking for big breakthroughs would have left unsatisfied. Most new work focused on rigorous analysis of data or painstaking theoretical modelling. As one attendee noted, such modelling often fails to produce surprising results, since it tends to reflect the assumptions that go into it.

Evidence for this downsizing of ambition is not purely anecdotal. A recent paper in *Nature* analyses citation data from 1945 to 2010 to assess the disruptiveness of papers and patents. The authors consider new work to be disruptive if later work that cites it is less likely to also mention its predecessors. The paper concludes that the share of disruptive research in the social sciences has fallen precipitously, even more so than in the actual sciences. As Tyler Cowen of George Mason University puts it: "In the last 30 years the reliability of empirical work and estimations has risen dramatically. Which is good. But few new important ideas have really been generated."

In New Orleans economics's biggest names offered ideas that were fresh and interesting, but hardly breakthroughs on the scale of, say, the Nash equilibrium or the idea of asymmetric information. Gita Gopinath, the IMF's chief economist, discussed research on how the economics of international finance has shifted since the seminal work of Robert Mundell and Marcus Fleming in the 1960s. In a seminar on economic growth, Thomas Philippon of New York University argued that growth follows linear trends, rather than being an exponential process. Daron Acemoglu of the Massachusetts Institute of Technology presented work on "distorted innovation", arguing against the idea that markets tend to get innovation right.

New theories without robust empirical support can be dangerous, as demonstrated by the rise of central planning during the 20th century. And big advances are easier to spot in hindsight. It may even turn out that there were some hidden among the presentations in New Orleans. Some conference attendees were also more optimistic about the present state of affairs. A professor noted that good questions in economics tend to come from real-world events—and the past few years have been tumultuous enough to raise plenty of good questions. Erik Brynjolfsson of Stanford University observes that the use of large datasets, machine learning and field experiments are all "game-changers". Innovation may therefore simply be shifting from theory to practice. Indeed, the use of high-frequency data, a feature of a presentation by Lisa Cook of the Federal Reserve, has given economists and central bankers a helpful new way to look at the world in their fight against inflation.

Yet the most compelling evidence on the impact of monetary policy on inflation came from Christina Romer of the University of California, Berkeley, who dusted off an old-fashioned method. In her talk, she argued that monetary-policy changes have bigger effects on unemployment than inflation, and that it sometimes takes a few years for their main impact to be felt. The method used by Ms Romer and her husband and co-author, David Romer, was not a new statistical technique or even timelier data, but a "narrative approach". The Romers combed through transcripts and minutes from meetings held by the Federal Open Market Committee—just as they had when they developed the method in a paper published in 1989. ■

The death of FTX

Hunting for crypto riches

Bankruptcy courts are not built for Sam Bankman-Fried's mess

On January 5th Sam Bankman-Fried turned up at the funeral of his own crypto empire. He lodged a complaint against FTX's bankruptcy proceedings, demanding $500m in frozen assets earmarked for creditors. Mr Bankman-Fried wants the money in order to pay legal fees for his criminal trial, in which he is accused of sucking billions of dollars of customer deposits from the crypto exchange for his own use (he has pleaded not guilty).

The demand is an opening salvo in what will be a long, chaotic battle. America's bankruptcy laws have evolved over centuries to pick apart regular businesses. Now, on the fly, lawyers must work out how to apply them to crypto companies. In November FTX filed for bankruptcy under Chapter 11, which allows a bankrupt firm to reorganise rather than liquidate. The process usually plays out as a legally refereed tussle between a company and its creditors. The firm, told by a court what it owes, tries to convince lenders to accept stakes in the business rather than cash. If successful, it emerges with less borrowing and a shiny new growth plan. If unsuccessful, it shuts up shop. A big restructuring might have 100 creditors. A long one lasts a year. A complex one takes at least a couple.

In a hearing on January 11th, it emerged that FTX may have as many as 9m creditors—making it, by this measure, the ugliest corporate carcass ever seen. The firm's breakdown has left 134 insolvent entities in 27 jurisdictions. They range from FTX Zuma, a Nigerian exchange, to Good Luck Games, a game developer. The proceedings could take a decade, and turn up more allegations of wrongdoing. As he sorts through the mess, John Ray III, Mr Bankman-Fried's successor as boss of FTX, has become a de facto federal investigator. In a recent visit to Congress he promised to recommend more suspects for criminal charges if he stumbled across candidates.

The bankruptcy court's first task is to find those owed money. Creditors are usually keen to come forward. Not in bankruptcies dealing with crypto. For many, the attraction of storing wealth this way is its facelessness. Lodging a claim requires an ID check, so creditors must decide quite how deep their desire for privacy runs. Investors, who include some of tech's most illustrious funders, are also reluctant to fess up to their involvement. To coax them out of hiding, the court has—in a highly unusual move—agreed to keep FTX's 50 biggest creditors under wraps.

At the same time, Mr Ray is scrambling to locate assets. This involves constructing corporate accounts from what he calls the worst record-keeping he has ever seen. FTX did not even keep note of how much customers deposited. Billions of dollars were lost by Alameda, a sister trading firm. Until November 29th lawyers thought there were at least next to no external loans. Then BlockFi, another bankrupt exchange, demanded $500m in shares that FTX held in Robinhood, a share-trading platform, insisting FTX had put them up as collateral for borrowing.

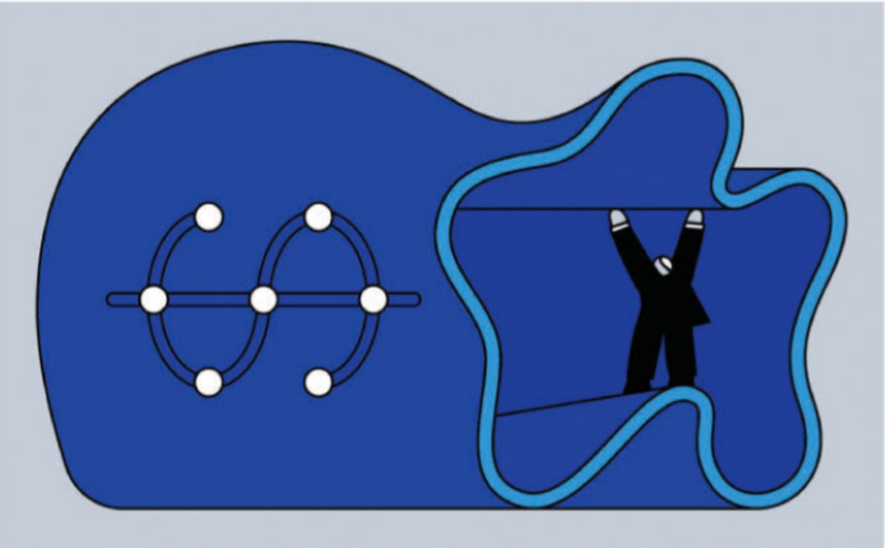
So far, Mr Ray has pieced together just a few billion dollars of assets. And finding assets is only half the battle—getting at them is harder still. In an early fracas, American and Bahamian authorities spent months sniping at one another, before agreeing to bring tokens worth at least $3.5bn into American proceedings. Mr Ray is also hunting FTX's donations. Mr Bankman-Fried gave freely to politicians and effective-altruist charities. FTX's new boss has said he will sue for the money.

American courts have yet to complete a significant crypto restructuring. This poses problems. Crypto has been around for 15 years, but nobody can agree on what it is. Token swaps are recorded on virtual ledgers by software on a blockchain, which no single person controls. This does not fit with property law, which assumes people own things because the law says they do or they physically have them in hand. Stocks have certificates of ownership; chairs are sat on by their owners. In contrast, the law does not enforce crypto ledgers and recording something on a blockchain does not conjure a physical coin.

Thus even creditors that do come forward may not be fully compensated. When an exchange trading stocks goes under, customers are protected by the Uniform Commercial Code, a law that governs commercial transactions in America. FTX's terms of use explicitly disregard this law. On January 4th the judge in another crypto bankruptcy ruled that some of the customers lack ownership rights over their deposits. FTX's customers may have to wait years to find out what they will receive.

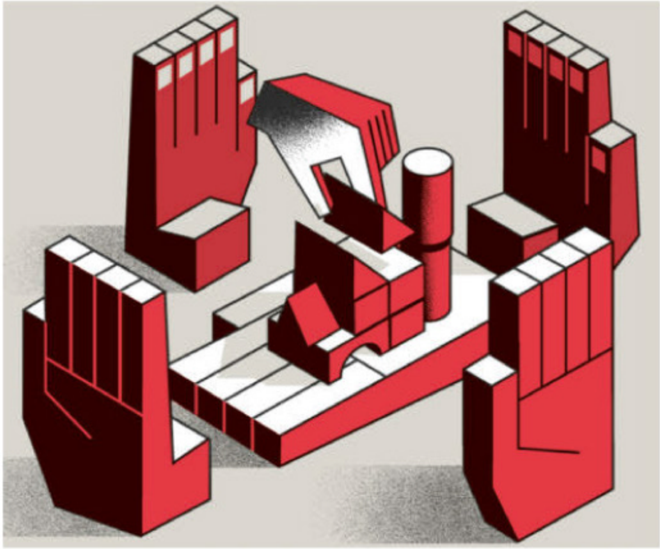
If a settlement is agreed on, depositors face a final danger. Most of FTX's recoverable value will probably be in crypto tokens. The one thing such tokens are not—lawyers and politicians agree—is currency, since money must be backed by a government. It seems that when the time comes to carve up FTX's assets, the court will have to dish out claims in dollars. This raises the question of which day's exchange rate to use. FTX's estate holds so many tokens that auctioning them could spark a fire sale, burning the tokens' market value.

Another route would be to sell accounts to a solvent exchange. That would avoid the need to squeeze cash out of tokens no one wants, but would keep debris from the worst embarrassment in crypto's history floating around for years to come—and require a buyer to be found. On January 5th American regulators intervened to stall a deal that would have seen Binance, the world's largest crypto exchange, take on $1bn in assets from Voyager, another bankrupt firm. There is one certainty from the proceedings to come. FTX will go down as it lived: in breathtaking chaos. ■



Free exchange | Picking losers

Warnings from history for a new era of industrial policy



"Free trade is almost dead," declared Morris Chang, the founder of TSMC, dampening the mood at an event in December to celebrate a milestone in the building of the Taiwanese chipmaker's new fab in Arizona. The remark was not out of character. In July he called America's effort to bring chipmaking home an "exercise in futility". Until recently, rich-world governments mostly shared his judgment. But worries about supply-chain security in a fraught world are prompting experimentation. History provides some reasons for optimism—as well as many for concern.

Industrial policy is just about as old as industry itself. Scarcely had Britain's Industrial Revolution got going when Alexander Hamilton, America's first Treasury secretary, argued for protection of his country's industry, declaring that Adam Smith's arguments in favour of free trade "though 'geometrically true' are 'practically false'". America, France and Germany industrialised behind tariff barriers. After the second world war scores of governments tried to help industrialisation along, with seeming success in places like Japan and South Korea, and rather different results elsewhere. Policy today is of a different sort: pursued by countries already at the technological frontier, in a world of complex global supply chains. Yet past research still holds valuable lessons.

Recent interventions are mostly based on "infant-industry" arguments. The idea is that, if the state corrects a market failure, a particular industry might thrive on its own in an economy where it is nascent or absent. Local firms might need investment in know-how or equipment to be competitive, which imperfect capital markets cannot finance. Alternatively, production might require a network of suppliers and manufacturers, but firms struggle to co-ordinate. Or there may be information problems. An economy might have undiscovered potential, but an entrepreneur who seeks it out risks revealing it to competitors, which costs him the opportunity to profit from his discovery. In each case, government support or a brief spell of protection from foreign competition (or both) might create the space the industry needs to mature.

Working out if these theories are practically or merely geometrically true is no simple task. Industrial policy is never conducted in isolation, meaning it is often challenging to isolate its effects. Still, careful work suggests that infant-industry policy can work in the real world. In the 1970s, for instance, America was the dominant exporter of computer chips. The Japanese government invested heavily in semiconductor research, and may have helped chip-consuming Japanese firms co-ordinate to obtain most of their supply from fledgling Japanese producers (in effect shutting American firms out of the market). Work by Richard Baldwin of the Graduate Institute in Geneva and Paul Krugman of the City University of New York concluded that these policies supported the accumulation of expertise, without which Japanese firms could never have succeeded in export markets.

More recent work by Myrto Kalouptsidi of Harvard University revealed that Chinese shipyard subsidies between 2006 and 2012 reduced costs by as much as 20%. These subsidies, she reckons, helped account for a major reallocation of shipbuilding, with Japan the big loser. Other research turns up more cases when interventions have helped industries secure a market foothold, and meaningfully influenced the global distribution of production. At least sometimes, comparative advantage can be engineered.

Yet an abundance of caution is in order. Interventions often raise costs and thus hurt consumers. Messrs Baldwin and Krugman judged the Japanese were made worse off, on net, by the effort to build a chip-exporting industry. Because the output of one industry is often the input for another, help for upstream producers can inflict pain further along the supply chain. Reviewing efforts to boost steel industries across 21 countries, Bruce Blonigen of the University of Oregon found such interventions sharply cut the export competitiveness of downstream industries.

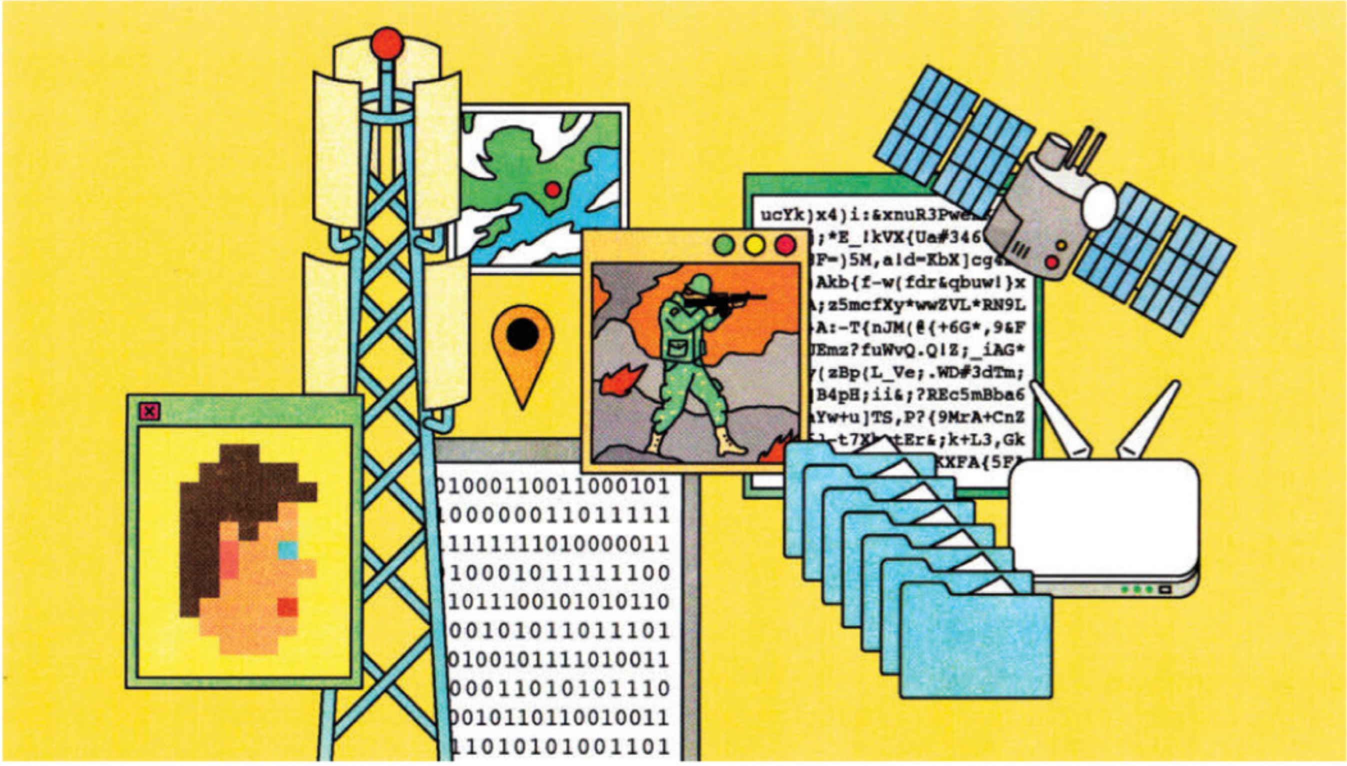
Governments, for their part, must be willing to cut off help, so that winners eventually swim while losers sink. Otherwise zombie firms will tie up capital and labour, and drag down growth. Local conditions matter. A study of EU investment funds provided to poorer regions, by Sascha Becker of the University of Warwick and Peter Egger and Maximilian von Ehrlich of ETH Zurich, found that the cash translated into faster growth in investment and income—but only in places with strong institutions and educated workers.

And as the world is rediscovering, careless policy can provoke retaliation, leaving everyone worse off. This may prove to be a particular problem at a time when sophisticated goods are produced along cross-border supply chains. If friendly countries fail to co-ordinate, they may end up funding duplicative plants, which cannot all be economical, or orphan industries without access to the foreign components they need to compete.

Hard problems

Policies which fill institutional gaps are safer. Douglas Irwin of Dartmouth College notes that America's tariffs in the 19th century do not seem to have been decisive in promoting its rise to industrial dominance. Banking laws that facilitated saving and investment were more important. In their survey, Ann Harrison and Andrés Rodríguez-Clare of the University of California, Berkeley, doubt that "hard" interventions which distort market prices are of use, but find an important role for "soft" collaborations between firms and the state, to solve co-ordination failures.

This does not mean that the "harder" parts of America's policy mix will doom its reshoring enterprise. Mr Chang, for his part, insisted in December that he gave his remarks "in the full expectation that we are going to have success". Indeed, the most pressing concern may be less that America's gambit will fail, than that it will succeed in boosting domestic industry—and leave a fractured world worse off for it. ■



Propaganda

What is truth?

Proving a photo has been faked is one thing. Proving it hasn't is quite another

That truth is the first casualty of war is an old aphorism. One recent instance is the proliferation of images and videos of things that did not happen, in wars such as those currently going on in Ukraine and Syria. Some of these are outright fakes. Others are manipulated versions of honestly recorded material. Last year a doctored video appeared of Ukraine's president, Volodymyr Zelensky, apparently telling Ukrainian soldiers to surrender.

The proliferation of such fakes has, though, led to a second, more subtle approach to lying with images. This is to use their ubiquity to cast doubt on the veracity of inconvenient pictures that are real.

Shortly after Russia invaded Ukraine last year, for example, the Associated Press released a video of doctors failing to revive a young girl who had been hit in the shelling of Mariupol. The footage soon appeared on Russian television with the word "fake" stamped on it. Since it is hard to prove a negative (ie, that material has not been doctored), such evidence may thus be challenged, possibly even in court, and allegations of crimes based on that evidence may, as a result, not stick.

Ways to establish the authenticity of digital imagery would therefore be valuable. And one is now available. "Glass-to-glass" warning systems create special software "ecosystems" within which pictures and video can be taken, stored and transmitted in a way that alerts viewers to alterations, no matter when and where those changes are introduced in an image's journey from lens to screen.

A plate of hash

One such system has been developed by eyeWitness to Atrocities, a charity based in London. The app at its core does two things. First, when a photo or video is taken by a phone fitted with that app, it records the time and location of the event, as reported by hard-to-deny electronic witnesses such as GPS satellites and nearby mobile-phone towers and Wi-Fi networks. This is known as the controlled capture of metadata, and is more secure than collecting such metadata from the phone itself, because a phone's time and location settings can be changed.

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Second, the app reads the image's entire digital sequence (the zeros and ones which represent it) and uses a standard mathematical formula to calculate an alphanumeric value, known as a hash, unique to that picture. All this done, it then puts the metadata and the hash into a file called a proof bundle that is separate from the image and sends an encrypted copy of the image and its proof bundle to a special server.

Wendy Betts, director of eyeWitness to Atrocities, describes this server as a digital evidence locker. If an image's authenticity needs to be verified, it suffices to rescan its digital sequence, recalculate its hash, and then ask the repository whether or not it contains an identical hash. If even a single pixel of the image has been altered, the recalculated hash will not match the original. If it does match, then the image has not been retouched.

As an additional service, roughly 80 lawyers, each working for the charity without pay for a few hours a week, review the incoming images. They package those which seem to record abuses into dossiers that are then sent to prosecuting authorities including Europol (a law-enforcement ▸▸

agency of the European Union), the International Criminal Court and Ukraine's Office of the Prosecutor-General.

Andriy Kostin, the prosecutor-general himself, is a fan of the eyeWitness system—and not just because it provides the security of authenticity that courts require. He also likes the fact that it helps overcome a second obstacle to his efforts: witnesses' fear of being found out.

Making connections

In areas of Ukraine that are occupied by Russia, this is a serious risk. Were soldiers manning a checkpoint, for example, to discover on someone's phone video evidence collected by that person of war crimes, the consequences could be severe. To make this less likely to happen, the app's icon does not reveal its purpose. Moreover, if it is then tapped by a probing official and an incorrect passcode entered, that opens the phone's normal photo gallery. Maryna Slobodianiuk, lead investigator at Truth Hounds, a human-rights group in Kyiv, says of the evidence of attacks she has collected using eyeWitness: "Even if I will be captured…no one will reach it."

The first version of eyeWitness's system, available gratis, was released in 2015, so most of the bugs have been dealt with. Uptake in Ukraine has soared over the past year. Ms Betts says that of the 40,000 submissions received in 2022 which her team considers relevant for investigations, more than 27,000 were sent from Ukraine.

Police officers and journalists are particularly eager users. So are analysts at the Ukrainian Healthcare Centre, a think-tank in Kyiv that employs the app to gather evidence of attacks on medical facilities.

Nor is eyeWitness the only provider of glass-to-glass services. The Guardian Project, in Valhalla, New York, has released a smartphone app called ProofMode. Like eyeWitness, ProofMode combines controlled-capture metadata and the image's hash into a proof bundle. Instead of operating the receiving server itself, though, ProofMode uses repositories run by other firms, such as Google, which log them in the fashion of a notary. Viewers of an image taken with ProofMode can upload it to a Guardian Project website that recalculates its hash and checks the repositories for a match. If it fails to find one, the image is declared altered.

Soon, the Guardian Project will add a new feature, Synchrony. This will link an image's location and time-of-capture to OpenStreetMap, an online cartography of the world, and also to a detailed geographical record of the world's weather over the past few years (which one, has yet to be decided). That will make it easy to check for inconsistencies between the place and time someone claims a picture was taken, and the local landscape and the weather conditions on that day. The idea, says Nathan Freitas, the Guardian Project's founder, is to "sync images to the real world as it was". He hopes to link to other databases, as well—including those that record when and where street protests have happened.

A third operator, Truepic, of La Jolla, California, is taking a more commercial approach. Charities pay nothing to use its software, but companies that employ it to keep an eye on things like supply chains, progress at construction sites, compliance with loan terms, and the whereabouts and condition of expensive kit, must stump up.

Truepic provides two services. One scans smartphones for malware designed to facilitate the falsification of metadata. The other spots so-called rebroadcasting attacks, in which a doctored image is photographed to create a new picture, which thereby lacks traces of tampering in its code. Mounir Ibrahim, once a member of America's diplomatic corps (he served, *inter alia*, in Damascus, a hotbed of photographic deception), and now head of public affairs at Truepic, is cagey about how this is done. But the trick, he notes, is to look for clues that all of an image's pixels have recorded a uniformly flat surface.

In 2021 Truepic joined forces with Adobe, ARM, the BBC, Intel and Microsoft to form the Coalition for Content Provenance and Authenticity (C2PA). This is trying to create a set of image-authentication technological standards for makers of hardware and software. The aim is to eliminate the need to fuss with special apps. Instead, the coalition wants metadata capture, hashing and the transmission of data to repositories to take place behind the scenes and without royalties.

If C2PA's standards were widely adopted, even web browsers would be able to check an online repository of hashes and put a warning on images with no match. Eventually, hashes might be distributed automatically across blockchain ledgers. The Starling Lab, based at Stanford University, is running trials of such a system.

Hurdles, however, remain. Jonathan Dotan, the Starling Lab's founding director, points to one in particular. The technology could potentially allow authoritarian regimes to identify devices, and thus people, who have taken damning pictures. Researchers, he says, must first find a way to make such tracing impossible. Transparency is all very well, but even the good guys recognise that, sometimes, too much of it can be too much of a good thing. ■

Bug bites bird

Birds feast on bugs, not the other way around. But that role-reversal is what Mahmood Kolnegari of the Avaye Dornaye Khakestari Institute, in Iran, and Connor Panter of the University of Nottingham, in Britain, saw when they put a camera near the nest of a purple sunbird, in Kerman province, Iran. As they report in *Ecology and Evolution*, their camera captured footage of a praying mantis killing a nestling and eating from it. Praying mantises are known for their aggression, but even so, the attack was a surprise to the researchers. They assumed it was a bizarre one off until, a month later, they caught a second mantis killing and feeding on a nestling crested lark. Searching the literature to see if such predation had been noted before, they found a single, century-old report documenting a similar finding. A more general internet search revealed a couple of non-scientific reports, from Taiwan and Brazil, of mantids eating nestlings.

Horticulture

Flower power!

Wasp larvae that eat aphids from the inside out may save apple crops

FEW INSECTS strike greater fear into the hearts of orchard-owners than rosy apple aphids. These tiny bugs feed on the leaves of apple trees, draining them of nutrients. Their saliva, meanwhile, contains a toxin which causes those leaves to curl up and harden, providing an excellent place for them to shelter, including from insecticidal sprays. And the honeydew they excrete once they have extracted what nutrients they need from the sap they have ingested encourages the growth of a sooty mould that can further harm a tree. A bad rosy-apple-aphid infestation can reduce an orchard's yield by 80%.

In the battle against these aphids some propose harnessing the services of tiny wasps called *Ephedrus cerasicola* and *Aphidius matricariae*. Like many of their kin, these insects are parasitoids, a trophic status halfway between being parasites and predators. Instead of killing and then eating their prey, parasitoid wasps eat and thus kill them—or, rather, their larvae do.

Females inject their eggs into their victims—in this case rosy apple aphids—once they have mated. The larvae that hatch from them go on to devour their hosts' organs before pupating and emerging as adults. If the wasps' services could be harnessed, it might thus be possible to reduce, or even dispense with, chemical insecticides. That would save money. And it would also make life easier for orchard-owners who seek the premium-price-generating imprimatur "organic" for their produce, a label which is incompatible with such chemicals.

Mobilising parasitoid wasps for pest control has a long history, beginning in the 1920s with their employment in greenhouses against whitefly. Unfortunately, attempts to use *E. cerasicola* and *A. matricariae* to control rosy apple aphids have so far failed. But Louise Ferrais and Thierry Hance of the Catholic University of Louvain, in Belgium, think they know why. Previous efforts, they reckons, have been so focused on the dietary requirements of the carnivorous larvae that they have neglected those of the nectar-loving adults. As they describe in the *Annals of Applied Biology*, they propose to change that by planting banks of flowers beside the trees.

To test this idea, they ran an experiment in an organic apple orchard. They divided it into six plots, each of 700 square metres. Three, they planted with strips of a mixture of 30 wildflower species. The other three they left flowerless, as controls. As winter ended, and aphid season drew nigh, they attached to each of nine trees per plot a tube containing about 1,250 wasp pupae (a mixture of the two species) from which adults were about to emerge—and repeated that between ten and 20 days later, to bolster the population. Then they examined selected trees at ten-day intervals for colonies of aphids.

The presence of flowers, they found, was associated with a reduction in the number of aphids in a plot by a third, compared with the controls. Though that is not as impressive as the 80-90% drop which would follow a pesticide blitz, it is a proof of principle, and might be improved by better management of the wasps and more understanding of their ecological needs. And that would, indeed, be valuable to fruit growers who wish to retain the all-important "organic" label while having at least some crop left to harvest. ■

Conservation

The elephant in the room

What causes elephant poaching? Poor, badly governed people, mainly

EVERY DAY, thousands of rangers patrol national parks and other protected areas in Africa. Their job is fraught with danger, both from hostile humans armed with automatic weapons and from the unappreciative and potentially aggressive wildlife, armed with tusks, teeth and claws, which they are helping to preserve. But their work is important, not least because the data they collect are crucial to conservation planning.

That is particularly true of data on poaching, which remains, in both senses of the word, an elephantine problem. Since 2006 African elephant populations have declined by around 30%. In 2021, according to Monitoring the Illegal Killing of Elephants (MIKE), a conservation programme, around 40% of elephant deaths were a result of poaching.

The severity of elephant poaching varies from place to place. The MIKE data show a welcome fall in rates throughout the 2010s, but according to research published in 2020 by Scott Schlossberg of Elephants Without Borders, a charity, this can be attributed entirely to a decline in eastern Africa.

Elsewhere, there is great variation in the pressure on pachyderms. Some parks, like Garamba in the Democratic Republic of Congo (DRC), are badly hit—with more than 90% of the carcasses found by rangers being victims of poachers. In others, like Chobe, in Botswana, less than 10% of dead elephants discovered have been killed illegally.

To untangle the factors influencing poaching, Timothy Kuiper of the University of Cape Town, Eleanor Milner-Gulland at Oxford, and a team of collaborators have analysed data collected for MIKE by rangers from 64 sites in 30 African countries over the course of 19 years. They correlated these with potentially relevant factors, both natural and human, and have published their findings in the *Proceedings of the Royal Society*.

Natural variables such as habitat type, they discovered, make little difference. Human ones predominate. Unsurprisingly, but nevertheless pertinently, low household wealth, poor health, poor law enforcement and poor national governance all contributed to higher rates of poaching. So did the price of ivory.

There was one unexpected result, though—the impact of armed conflict. For there did not seem to be much. What impact there was, was a consequence of a few special cases in DRC, the Central African Republic and Ethiopia, rather than a general rule about young men with guns behaving badly.

One factor that was unquantifiable, and therefore untestable, according to Dr Kuiper, was local political will to preserve wildlife. But this study does nevertheless confirm observations made elsewhere, that the best form of conservation is a prosperous population.

May elephants safely graze?

Ancient building materials

Concrete propositions

Roman civil engineering has lessons for the modern world

The Romans were master builders. Many of their works, from the Pantheon (pictured above) and the Colosseum in Rome itself, to the Pont du Gard in southern Gaul and the equally impressive aqueduct of Segovia, in Spain, have withstood the ages. What damage has been done to such constructions is more often the result of stone robbery than structural failure.

Roman work of another sort has survived the centuries, too. “De Architectura” is a ten-book series by Marcus Vitruvius Pollio, an engineer and architect of the first century BC, who is believed by many scholars to have worked with Julius Caesar on some of his military campaigns. These volumes include various tips intended to ensure that buildings “don’t fall into ruins over a long passage of time”.

One reason for Roman engineers’ success was concrete. (The Pantheon’s roof is the largest unsupported concrete dome in the world.) Roman concrete is known to defy the centuries without losing much of its firmness. Indeed, it can even get stronger with age. How this happens is only now coming to light.

Part of the explanation lies in the volcanic rocks of areas such as the Alban Hills, south-east of Rome, and Pozzuoli, near Naples. These provided crucial ingredients. As Vitruvius himself describes, the cement Romans used to bind the aggregates of concrete was a mixture of lime and volcanic ash. (The aggregates themselves were generally sand or crushed volcanic rock—which, in the case of the Pantheon, included pumice, to make the structure lighter.)

Several recent studies have shown that the ash not only contributed to the concrete’s strength and durability, but also enhanced cohesion between the aggregate particles after the mixture had been cured. This happened when water seeped in, dissolving some of the volcanic minerals and creating calcium aluminosilicate hydrates (C-A-S-H), the main binding material in the concrete. That also slowed the propagation of microscopic cracks. Moreover, some crack walls showed C-A-S-H infill—an indication that Roman concrete possessed a certain self-healing power.

In one of these studies, published in 2021, a team led by Marie Jackson of the University of Utah and Admir Masic of the Massachusetts Institute of Technology described the structure of the mortar (a fine form of concrete) of a brick wall in the tomb of Caecilia Metella, which stands beside the stretch of the Appian Way between Rome and the Alban Hills. In part because of its solid masonry (so solid that it was repurposed as the keep of a castle during the Middle Ages), this building is one of the best-preserved monuments decorating that antique Roman highway.

The researchers studied how leucite, a potassium-rich volcanic mineral, dissolved in the water and reconfigured the chemical bonds between the cement and the aggregates, strengthening the interfaces between them, and making the whole structure more resilient.

This volcanic touch is, though, only part of the story. Lime, the other ingredient of Roman cement, also had a role in the post-curing strengthening of concrete. That, at least, is the conclusion of another paper by Dr Masic and a group of colleagues, which has just been published in *Science Advances*.

This time the researchers took samples from a city wall in Privernum, an archaeological site also to the south-east of Rome. These dated from the second century BC. They discovered that in this case it was mainly the lime that had caused cracks and fissures to be sealed, thus healing damage that might have gone on, if not nipped in the bud, to become serious.

The lime involved here was not the pure white powder described by Vitruvius. Rather, it was clumps a millimetre or so across that had failed to dissolve when the concrete was being prepared. Such clumps are often found in Roman concrete. Their role seems to have been as a reservoir of calcium carbonate for the processes of self-healing, permitting that material to be dissolved by seeping water admitted by tiny cracks and then re-precipitated in those cracks to seal them up.

Moreover, the distribution and the shape of the clumps suggest that the lime was added to the mix as quicklime, rather than, as is common today, slaked (hydrated) lime. This would mean that Roman concrete was made, at least partly, by hot mixing—for slaking quicklime with water releases enough heat to raise the temperature of a concrete mix above 80°C. Today, concrete is mostly mixed cold, for hot mixing has the disadvantage that the concrete can expand. On the other hand, the practice allows faster curing. Possibly that is why Roman engineers preferred it.

By Jove and all the gods

This approach may hold lessons for today’s builders. “Roman concrete”, says Didier Snoeck, a structural-design engineer at the Free University of Brussels, in Belgium, “shows that modern cement, of which the production emits huge amounts of CO_2, is not indispensable for strong and durable concrete.” “We can’t”, he says, “replace all Portland cement with volcanic material, due to the necessary volumes of concrete to build infrastructure, but we can do it partially. And we can also use fly ashes, blast furnace slags and limestone calcined clays instead.”

Studying Roman concrete could also help modern engineers develop recipes for more durable, self-healing concrete. Increasing concrete’s lifespan would mean less repair and renovation was needed, helping buildings last longer. Who knows? Some of them might even outlast the Pantheon and the Colosseum. ■

Music in Latin America

Arms and the men

MEXICO CITY

To their critics, *narcocorridos* glorify drug barons. But their appeal is nuanced and revealing

ON JANUARY 5TH Mexican security forces captured Ovidio Guzmán in the north-western state of Sinaloa. He is a son of Joaquín Guzmán, an infamous drug lord better known as "El Chapo". Irate gunmen took to the streets; at least 29 people were killed. Something similar happened when Ovidio was apprehended in 2019. On that occasion, the country's president ordered his release.

The fiasco was immortalised in a song called "Soy El Ratón" by the group Código FN. The title means "I am the Mouse", a reference to its subject's nickname:

> Guzmán's first name is Ovidio
> His father as a child
> Nicknamed him 'the Mouse'
> A boss with a lot of brains
> He is the son of El Chapo...

This is a *narcocorrido*, or drug ballad. Today some of Mexico's most popular bands, such as Los Tigres del Norte (the Northern Tigers, pictured), write and perform songs about crime bosses and their activities. Most Mexicans could sing or hum one of them. Performed by several other high-profile Mexican singers, "Soy El Ratón" has become particularly well-known, and has contributed to a rolling debate about the propriety and impact of the ballads.

Some authorities are unimpressed. To prevent the spread of "narco-culture", radio stations have been cajoled by local leaders to stop playing *narcocorridos*; some have eschewed them voluntarily. In 2017 Los Tigres del Norte were fined 500,000 pesos (then $26,400) for performing a drug ballad at a concert in Chihuahua, capital of a border state of the same name.

It is true that some of these songs seem to glorify not only the gangsters' wealth but their violence, too. Some are written at a baron's request, to boost his image (it is almost always a man), and thus involve contact with gangs. Other artists seek permission from their subjects, lest they face grave repercussions for crooning out of turn. At the very least, some singers seem to condone the criminals—though criticising them would be rash.

"These are people who have done things I wouldn't do," says Lupillo Rivera, a singer known as "the bull of the *corrido*". But "you have to respect their talent and wisdom and intelligence." When another of El Chapo's sons was killed in the city of Culiacán in 2008, he is said to have ordered that all the roses in town be bought for the funeral—a gesture immortalised in a song that Mr Rivera wrote on an aeroplane after reading the news. YouTube banned a video for another of his tracks in 2020. "I started to sing *narcocorridos* because people in clubs and bars like them," he says, "but the radio wouldn't touch them."

Yet *narcocorridos* are more nuanced than they may seem. To begin with, they ▸▸

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are reflections of reality, much like "Narcos", a hit Netflix series about drug-traffickers in Latin America. They can be a source of information; sometimes they are more accurate than newspapers.

Take "Wheel of Fortune" by Alfredo Olivas. Released in 2017, the song told of an unlikely pact between Rafael Caro Quintero, another old-school drug boss, and Nemesio Oseguera Cervantes, or "El Mencho", the head of the newer Jalisco New Generation Cartel, now the country's strongest organised-crime group. A few years later the existence of the agreement was confirmed.

Like followers of gangsta rap, the genre's fans—including millions of Mexicans who moved to America and their descendants—are overwhelmingly law-abiding. For them *narcocorridos* are cracking songs, but they also represent a reclamation of ethnic identity. Amid the bling and gore, they can even come across as salutary tales of values such as loyalty, hard work, bravery and hope for a better life. "For an undocumented person in the United States, a three-minute musical fantasy of a powerful Mexican can be intoxicating," says Juan Carlos Ramírez-Pimienta of San Diego State University-Imperial Valley.

They emerged out of the ballad tradition, not at the behest of the cartels. *Corridos*, or narrative songs, have a long history in Mexico, recounting the exploits of fictitious or real people from the war of independence that began in 1810 to the revolution a century later. In the late 1920s and early 1930s ballads in the northern regions began to tell of tequila-trafficking to Prohibition-era America. Later narcotics seeped into the lyrics. *Narcocorridos* really took off in the 1970s, along with the drug trade.

The evolution of the music has since reflected changes in the drug business. Rafael Saldívar of the Autonomous University of Baja California has studied the lyrics. From the 1970s to the mid-1980s most ballads focused on the trafficking itself, the vehicles or routes used and the violence involved. Then, as the likes of El Chapo made their names, they turned to the *capos*, their women and their luxurious lifestyles. With the Mexican economy in crisis, the *narco* became an aspirational figure and the songs more admiring.

Shooting the messenger

Then came the "war on drugs" waged from 2006 to 2012 by Felipe Calderón, a former president. A government assault on the cartels led to skyrocketing violence: murders in Mexico rose from eight per 100,000 people in 2007 to 24 in 2011. The songs became more graphic. "With an AK-47 and a bazooka on my shoulder,/Cross my path and I'll chop your head off./We're bloodthirsty, crazy and we like to kill," runs a number by the group BuKnas De Culiacán.

Meanwhile the advance of *narcocorridos* into mainstream popular culture mirrors the spread of organised crime across Mexico. The drug trade is no longer a matter of a few *campesinos*, or rural farmers, in the northern Mexican states trafficking locally grown opium. Gangs have evolved to transport cocaine from Colombia (where *narcocorridos* have also taken off) and manufacture fentanyl, alongside various other rackets. They operate across the country, including in cities. In tandem, young urban listeners now see *narcocorridos* as just another genre of popular music.

The number of *narcocorridos* and singers of them has risen in the age of the internet. This growth has made the critics nervous—even if history suggests that banning things often increases their appeal. The current federal government seems relaxed about the trend, however. Grupo Firme, a band whose repertoire includes drug ballads, played in the Zócalo, Mexico City's main square, on Independence Day in 2022. Mexico's organised-crime problem is getting worse. *Narcocorridos* reflect that grim trend, for better or worse. ■

Historical fiction

Swords and sandals

In an insightful novel, cinema meets radicalism in the Egypt of the 1950s

Picture in the Sand. By Peter Blauner. *Minotaur Books; 352 pages; $27.99*

In its gruesome propaganda videos, Islamic State reviled the West. Yet the cinematic horror seemed influenced by Hollywood—not surprisingly, given many of the jihadists would have grown up on American action films and video games. Peter Blauner's new novel, "Picture in the Sand", depicts a fictional case of this split-personality syndrome.

Alex is an Egyptian-American whose earliest memory is of being called "Osama" in the playground after the terrorist attacks of September 11th 2001. Disillusioned, he swaps Cornell University for war in Syria. In a desperate bid to bring him home, his grandfather emails him with a long-kept secret: he too once fell under the sway of violent Islamists. What follows is both a cautionary tale and a mesmerising tour of Egypt in the tumultuous 1950s.

The grandfather is a cinephile named Ali Hassan. He grows up a short walk from the pyramids, but his object of worship is American cinema. In a darkened auditorium, the film projector's "celestial white beam" entrances him. Ali dreams of changing his name to Al Harrison and cruising the coast of California in a Chevy. In autumn 1954 his Hollywood stars align when Cecil B. DeMille (pictured with Charlton Heston) arrives in Egypt to shoot "The Ten Commandments". The 24-year-old lands a gig as DeMille's assistant: "I was parked along the corniche of the Nile, humming movie music to myself as if the epic motion picture of my life was about to finally begin."

Mr Blauner's enchanting novel draws on the odd but true story of how "The Ten Commandments" was filmed amid politi-

Ready for their close-up

cal chaos in Egypt. Two years before DeMille's arrival, Gamal Abdel Nasser and his revolutionary Free Officers had deposed the British-backed monarch, ending centuries of foreign rule. Then, in 1954, Nasser ousted the new republic's president, whom he accused of cosying up to the Muslim Brotherhood, a popular Islamist group. In the novel, Ali is pulled between the bright lights of Hollywood and the austere but noble-sounding Brothers.

The real Nasser was a fan of DeMille. He reportedly watched "The Crusades", another of the director's pictures, more than 20 times and was nicknamed "Henry Wilcoxon", after the British actor who played Richard I. In the book, Nasser is as much a "matinée idol as Emad Hamdy [an Egyptian actor] or Clark Gable", and his stardom is a political tool. In an episode adapted from history, he dodges eight bullets while giving a speech in Alexandria, dusts himself off and implores his followers to persevere. Mr Blauner's characters wonder if the assassination attempt was staged: "Those sound like some pretty flowery words for someone who'd just been shot at," says another film-maker.

Nasser uses the attempt on his life to unleash a brutal crackdown. By this point the mercurial DeMille has sacked Ali, who joins a Brotherhood plot to blow up the film set. He pulls out but is arrested anyway. In prison a Brother who closely resembles Sayyid Qutb, an influential Islamist thinker, makes an ominous prediction: "They've turned peaceful little kittens into hungry panthers who will eat them alive as soon as we're let out of our cages."

The real Qutb's texts, written in jail after his arrest in 1954, inspired generations of radicals (he was eventually executed in 1966). Some of those disciples ended up in Syria, waving black flags and producing flashily horrific propaganda films. Mr Blauner's novel revisits the moment when these contradictions were born. ■

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World in a dish

Fry and stop him

One man's quest to understand and glorify the chip

IT IS EASY to see why so many classic recipes are difficult to cook. A gleaming duck pâté en croûte, a deeply savoury *mole poblano*, a vast *timballo*, a perfectly clear consommé: they all involve long tallies of ingredients, tricksy processes and towers of specialist equipment.

The chip, by contrast, needs none of these. It is a simple thing—a long, narrow piece of potato, fried in oil. To be clear, these are the sort of thick, dependable chips that go with fish, not skinny *frites* or French fries, nor the kind shoved into American children's lunch bags. Chips are one of the "cheaply pleasant" foods with which the "underfed, harassed, bored and miserable" may console themselves, wrote George Orwell in "The Road to Wigan Pier". Fish and chips were thought to be so necessary to British well-being during the second world war that they were one of the few foodstuffs exempted from rationing.

Everyone knows the quiet but profound joy of a good chip. Soused in vinegar, splattered in mayonnaise or ketchup, their straightforward plainness is a comforting delight—even, or especially, in a post-festive season when you are meant to be abstemious. So it is striking that the creator of the über-chip is known for his inventiveness and complex experimentation.

Heston Blumenthal, a British chef, is famed for bewildering dishes such as the meat fruit—a chicken liver parfait disguised as a mandarin. In his hands liquid nitrogen went from something to be used to freeze off warts to a tool for making the smoothest of ice-cream (bacon-and-egg flavoured, naturally). He serves a seaside scene of edible sand with kelp and seafood, eaten to an accompanying soundtrack of ocean waves and the cawing of seagulls. He is one of the original "molecular gastronomists", with their foams and gels that taste of the unexpected.

And yet his greatest gift to the world may be the triple-cooked chip. Mr Blumenthal became obsessed with chips around 1992, before he had begun feeding restaurant diners snail porridge, before he even had a restaurant. The traditional double fry can too often end with chips that are either undercooked or soggy, a result of steam escaping from the middle and softening the crust. He wanted a "glass-like" crispy crust with a fluffy centre. An elaborate multistage process—involving boiling, freezing and frying—was his characteristically detailed solution.

Since becoming one of its doyens, Mr Blumenthal has expressed his frustration with the term molecular gastronomy. This, he has pointed out, is "simply the science of cooking". Like science, preparing food is a form of puzzle-solving. Why did your cake rise to a dome in the centre? Why won't my onions caramelise? High-end chefs like Mr Blumenthal must grasp the intricacies of transforming ingredients into ever more delicious things to eat.

But as he has demonstrated, cooking is also an art. And like artworks, dishes must be judged according to their ambitions. A pop song can be as great in its way as a symphony—and a chip as miraculous as a viridescent spherified pea. ■

Medical research

Health is wealth

A front-row seat for the race to develop a blockbuster drug

For Blood and Money. By Nathan Vardi. *W.W. Norton; 288 pages; $30*

Few scientific endeavours are more lucrative than developing a blockbuster drug—or a blockbuster vaccine. Lipitor, Pfizer's cholesterol-lowering medication, is reputed to have made the company more than $160bn. Advair, an asthma drug, has earned tens of billions of dollars for GSK (formerly GlaxoSmithKline). And BioNTech, a firm few people had heard of before the covid-19 pandemic, has made billions from its MRNA vaccine.

Naturally, pharmaceutical companies—and, these days, venture capitalists and hedge funds—are always searching for the next wonder drug. Nathan Vardi's new book is a fascinating look at the quest to develop a new drug for blood cancer that targets only cancerous cells and not the healthy kind.

"For Blood and Money" follows two small biotech firms in California, Pharmacyclics and Acerta Pharma, as they try to capture the market for a drug to treat chronic lymphocytic leukaemia, a cancer of the blood and bone marrow. The technique involves inhibiting the activity of Bruton tyrosine kinase (BTK), an enzyme that regulates chemical signals inside some white blood cells. Mr Vardi explains the science behind BTK inhibitors and shows how they became an attractive tool for cancer treatment.

The corporate drama begins with Pharmacyclics. The author introduces Bob Duggan, a successful entrepreneur who invests in the company, quickly wrests control from its founder and becomes CEO. Mr Duggan sacks a couple of key employees, who wind up at another biotech startup, Acerta. There they try to develop a rival drug that is also based on a BTK inhibitor. The race is on.

The technicolour cast of characters includes medical researchers, doctors, scientologists and New York financiers. Readers become acquainted with their personal ambitions, egos and quirks, and the intrigue and politics of their rivalries. Mr Vardi also lays out the slow, complicated process for the approval of drugs in America, overseen by the Food and Drug Administration, and the cold calculations of big pharmaceutical firms as they assess whether to invest in a new product. In the middle of it all are the patients, often elderly and desperate for a cure.

A financial journalist, Mr Vardi knows the world of venture capital intimately, and is at his strongest when writing about the financial aspects of deals. He delves into his characters' backgrounds and recreates meetings and events in detail; the contest between Pharmacyclics and Acerta comes alive. His efforts to present the story as a real-life thriller generate pace, even if the approach sometimes feels formulaic.

The story has a happy ending. The race ends up producing not one but two cancer drugs, Imbruvica from Pharmacyclics and Calquence from Acerta. Both are effective and become blockbusters. The prices are dauntingly steep, but tens of thousands of patients benefit.

As, royally, do the backers of the two drugs. Mr Duggan's own total investment of $50m in Pharmacyclics yields $3.5bn, Mr Vardi reports. (The firm was bought by AbbVie in 2015.) Imbruvica, which became available first—marketed jointly with Johnson & Johnson—generated over $5bn in revenues in 2021 alone. AstraZeneca took a majority stake in Acerta in 2016; their drug Calquence brought in more than a billion dollars in 2021 too.

This high-risk method for finding a new cancer treatment certainly works. Yet the reader is left with a nagging question. Is this testosterone-fuelled, profit-driven process really the best way to develop lifesaving drugs? ■

Cambodian culture

Going underground

How Cambodian music survived the horrors of the Khmers Rouges

Away From Beloved Lover. By Dee Peyok. *Granta; 368 pages; £16.99*

In 1974, in a town in central Cambodia, Keo Sinan hid his collection of records. Wrapping them in plastic bags, the musician stashed them in an outhouse. Through the years of war, famine and genocide, he checked on them once a week. The 45s were a fragile link to his previous life. But as the Khmers Rouges took over the country, they were a fatal liability.

Mr Keo Sinan's story features in "Away From Beloved Lover", Dee Peyok's unusual book. An oral history of Cambodian music, as told by those who survived the Khmer Rouge regime—90% of musicians may have perished—it is also an affecting memoir and travelogue. In 2014 Ms Peyok, a session musician besotted with Cambodia's unique take on rock'n'roll, moved from London to Phnom Penh, determined to unearth the country's musical inheritance. Her book is a portrait of a place trying to move on from its bloody history—and of a young woman finding her feet.

The band played on

In Ms Peyok's telling, Cambodian music had two golden eras. The first was at the height of the Khmer empire in the 16th century. The second came after independence from France in 1953, when Cambodian musicians spliced Western jazz, blues and rock'n'roll with traditional Khmer sounds. The arts, Ms Peyok writes, were "the perfect vessel" to modernise Cambodia. She evokes the hustle of Phnom Penh in the 1960s, a cosmopolitan capital where artists and spies danced in broiling nightclubs, to a beat that became the metronome of a generation across South-East Asia.

All that ended when the Khmers Rouges seized power. Pol Pot and his followers sought to impose a radical vision of agrarian communism. The regime declared it to be "Year Zero" and decapitated Cambodian society; those members of the intellectual and artistic elite who were not killed were sent to work on the land. All music, except party propaganda, was banned. Between April 1975 and 1979, when it was overthrown by the Vietnamese, the regime slaughtered around 1.7m Cambodians, about a quarter of the population.

The blame for the Khmers Rouges' takeover lies partly with America, Ms Peyok argues. In a bid to break the Ho Chi Minh trail, a north Vietnamese supply line, the American air force dropped over 2m tons of explosives—more than the Allies used in Europe and the Pacific during the second world war—on supposedly neutral Cambodia. This blitz was a powerful recruiting tool for the anti-imperialist Khmers Rouges. They drove the governing class from Phnom Penh on the lie that the Americans were about to bomb the city.

In the most moving parts of Ms Peyok's book, readers hear the musicians' stories in their own words. "I have hidden this inside for a long time," one of her interviewees says. When the author strays from their accounts, the focus blurs. Ms Peyok is an entertaining raconteur, detailing misadventures with creepy-crawlies in fetid guesthouses and a run-in with the modern-day Khmers Rouges. Yet her poetic prose slides occasionally into misty-eyed obscurity. The memories she has gathered needed no embellishment.

Still, her conviction that music can help Cambodia reckon with its past is compelling. Despite the country's woefully lax copyright laws, home-grown outfits are garnering international support to protect and celebrate its lost sounds. The book closes with a photograph of a soldier in flight. In one hand, he holds an assault rifle. In the other is an electric guitar. ■

Back Story Battle of Stone Mountain

A jumbo sculpture puts the history of Confederate memorials into stark relief

CARVING PEOPLE in stone creates two contradictory impressions, both misleading. Because the shapes are human, meddling with them can seem like an assault. At the same time, the stone confers an aura of antiquity, even if the sculptures aren't very old; they look both mortal and immutable, as much a feature of the landscape as the work of people or politics. That is doubly true if the forms are carved into a mountain.

The Confederate memorial on Stone Mountain in Georgia seems elemental. The vast bas-relief sculpture of Jefferson Davis, Robert. E. Lee and Stonewall Jackson—the Confederacy's president and two top generals—stretches over three acres of elevated rock face. As "Monument", a new documentary made by the Atlanta History Centre, an innovative museum, makes clear, the carving's history is as dramatic as its size. Yet it raises the same issues as other controversial memorials, if on a bigger scale: misconceptions about the past (not least its own), the fog of passionate loyalties and the virtue of dialogue.

It may look as if it has basked on the mountain for ever, but the memorial was first proposed only in 1914, almost 50 years after America's civil war ended. In the new film, available on the website of the museum, Sheffield Hale, its pithy boss, says the many Confederate monuments erected in that era were meant to show that "the people who had lost the war were now back in charge." They buttressed the Jim Crow segregation regime with public symbols of white supremacy. From the start, this particular memorial was linked to the Ku Klux Klan, which, after decades of quiescence, was reformed on Stone Mountain in 1915.

This association was deep and enduring. There was talk of including Klansmen in the carving. Gutzon Borglum, the original sculptor, hightailed it from Georgia after spats in part relating to the Klan's leadership. Borglum's preliminary work was blasted off the mountainside. He went on to carve Mount Rushmore.

The project petered out in the Depression but was revived in the 1950s. The prompt was not Appomattox but *Brown v Board of Education*. Soon after the Supreme Court ruled that segregated schools were unconstitutional, Marvin Griffin ran to be Georgia's governor. He pledged to uphold segregation—and finish the memorial. Once elected he bought the mountain (and surrounding park) for the state, calling it "a rallying point for all of us who believe in preserving the ideals for which our forefathers fought". The work resumed in 1964, just after the Civil Rights Act was signed. It wasn't finished until 1972.

All monuments simplify; many lie. The film shows that the real subject (or target) of this one was the civil-rights struggle, not the civil war or the valour of Southern soldiers, as some still claim. All the same, "Monument" even-handedly includes a defence of the sculpture by the daughter of the chief carver in the 1960s. "I want people to value that carving", says Donna Barron, "because I want them to value my dad's life." That is a version of the strongest case that can be made for keeping Confederate memorials: as a form of fealty to honoured forebears, recent or more remote.

Strongest, but not strong enough, given Stone Mountain's back story and the cause for which Davis, Lee and Jackson fought, namely maintaining the abomination of slavery. In the film, Genesis Reddicks, an activist in Georgia, observes that commemorating your roots is all well and good, but not if they are linked to your neighbours' trauma. The carving looms over hiking trails and attractions enjoyed by all kinds of Georgians; it is a short drive from Atlanta, a fulcrum of black history and culture.

What should be done about it—or to it? Stacey Abrams, a candidate for Georgia's governorship in 2022, has advocated the monument's removal. Others have suggested letting vegetation cover it over or putting a bell on Stone Mountain's summit (from which Martin Luther King dreamed freedom would one day ring). But Brian Kemp, who beat Ms Abrams, has vowed to protect the carving. State law prohibits its alteration.

This powerful film doesn't take a view, though a preservationist contributes a key distinction: "We should not erase history," says Brent Leggs, but "we don't have to revere that history." Instead, "Monument", and the museum, do something more important than settling a debate—by laying out the facts, they aim to start one. The implicit faith is that the past can be a compass rather than a battleground, and that opinions and divisions need not be carved in stone.

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	% change on year ago latest		quarter*	2022†	% change on year ago latest		2022†	%		% of GDP, 2022†	% of GDP, 2022†	10-yr gov't bonds latest,%		change on year ago, bp	per $ Jan 11th	% change on year ago
United States	1.9	Q3	3.2	1.9	7.1	Nov	8.1	3.5	Dec	-3.5	-5.5	3.5		179	-	
China	3.9	Q3	16.5	3.1	1.8	Dec	2.0	5.7	Nov‡§	2.4	-5.6	2.7	§§	11.0	6.78	-6.0
Japan	1.5	Q3	-0.8	1.5	3.8	Nov	2.5	2.5	Nov	1.9	-6.3	nil		-8.0	133	-12.9
Britain	1.9	Q3	-1.2	4.4	10.7	Nov	8.0	3.7	Sep††	-5.9	-6.6	3.7		248	0.82	-9.8
Canada	3.9	Q3	2.9	3.4	6.8	Nov	6.7	5.0	Dec	-0.6	-2.2	3.0		131	1.34	-6.0
Euro area	2.3	Q3	1.3	3.1	9.2	Dec	8.4	6.5	Nov	1.3	-4.2	2.2		218	0.93	-5.4
Austria	1.7	Q3	0.9‡	4.8	10.2	Dec	8.8	5.6	Nov	-0.7	-3.5	2.8		258	0.93	-5.4
Belgium	1.9	Q3	0.8	2.7	10.4	Dec	10.3	5.5	Nov	-1.5	-4.8	2.9		255	0.93	-5.4
France	1.0	Q3	0.7	2.5	5.9	Dec	6.0	7.0	Nov	-1.9	-5.3	2.7		244	0.93	-5.4
Germany	1.3	Q3	1.6	1.6	8.6	Dec	8.4	3.0	Nov	4.1	-4.1	2.2		218	0.93	-5.4
Greece	2.1	Q3	-2.1	5.0	8.5	Nov	9.6	11.4	Nov	-5.9	-4.5	4.1		256	0.93	-5.4
Italy	2.6	Q3	1.9	3.7	11.6	Dec	8.6	7.8	Nov	-0.8	-5.7	4.0		265	0.93	-5.4
Netherlands	3.1	Q3	-0.9	4.3	9.6	Dec	11.6	3.6	Nov	6.4	-1.4	2.5		242	0.93	-5.4
Spain	4.4	Q3	0.2	4.5	5.9	Dec	8.5	12.4	Nov	0.2	-4.7	3.3		265	0.93	-5.4
Czech Republic	1.6	Q3	-1.0	2.5	15.8	Dec	15.1	2.7	Nov‡	-4.0	-5.3	4.4		111	22.3	-3.5
Denmark	3.2	Q3	1.1	2.8	8.7	Dec	7.9	2.6	Nov	9.0	0.9	2.4		224	6.92	-5.2
Norway	2.5	Q3	6.3	3.5	5.9	Dec	6.4	3.2	Oct‡‡	18.8	12.2	1.4		76.0	10.0	-11.8
Poland	4.5	Q3	4.1	4.5	16.6	Dec	14.4	5.2	Dec§	-3.7	-3.7	6.0		194	4.36	-8.3
Russia	-3.7	Q3	na	-2.3	12.0	Nov	13.2	3.7	Nov§	12.3	-1.1	10.4		170	68.8	8.4
Sweden	2.6	Q3	2.4	3.0	11.5	Nov	7.9	6.4	Nov§	3.7	-0.5	2.1		173	10.5	-13.4
Switzerland	0.5	Q3	1.0	2.0	2.8	Dec	3.0	1.9	Dec	5.2	-1.0	1.3		127	0.93	nil
Turkey	3.9	Q3	-0.5	5.1	64.3	Dec	73.5	9.9	Nov§	-8.1	-3.4	9.4		-1407	18.8	-26.3
Australia	5.9	Q3	2.6	3.7	7.3	Q3	6.4	3.4	Nov	2.0	-1.9	3.7		184	1.45	-4.1
Hong Kong	-4.5	Q3	-10.0	-2.4	1.8	Nov	1.9	3.7	Nov‡‡	4.4	-6.4	3.4		165	7.81	-0.1
India	6.3	Q3	19.3	6.9	5.9	Nov	6.5	8.3	Dec	-2.7	-6.4	7.3		72.0	81.6	-9.4
Indonesia	5.7	Q3	na	5.1	5.5	Dec	4.2	5.9	Q3§	1.1	-3.8	6.8		46.0	15,482	-7.6
Malaysia	14.2	Q3	na	7.5	4.0	Nov	3.4	3.6	Nov§	1.5	-6.0	4.0		29.0	4.37	-4.1
Pakistan	6.2	2022**	na	6.2	24.5	Dec	19.9	6.3	2021	-3.9	-7.8	14.1	†††	251	228	-22.7
Philippines	7.6	Q3	12.1	7.7	8.1	Dec	5.6	4.5	Q4§	-4.2	-7.8	6.9		214	54.8	-6.7
Singapore	2.2	Q4	0.8	3.5	6.7	Nov	6.1	2.1	Q3	18.7	-1.0	2.9		103	1.33	1.5
South Korea	3.1	Q3	1.3	2.6	5.0	Dec	5.1	3.0	Dec§	1.2	-3.1	3.4		94.0	1,246	-4.1
Taiwan	4.0	Q3	7.5	3.0	2.7	Dec	2.9	3.6	Nov	12.4	-1.4	1.2		43.0	30.4	-9.1
Thailand	4.5	Q3	5.0	3.2	5.9	Dec	6.1	1.4	Oct§	-1.2	-5.0	2.5		64.0	33.4	0.2
Argentina	5.9	Q3	7.0	5.6	92.4	Nov	72.8	7.1	Q3§	-0.5	-4.2	na		na	181	-42.7
Brazil	3.6	Q3	1.6	2.8	5.8	Dec	9.3	8.3	Oct§‡‡	-3.0	-4.7	12.5		93.0	5.20	7.9
Chile	0.3	Q3	-4.6	2.3	12.8	Dec	11.6	7.9	Nov§‡‡	-8.1	-0.3	5.3		-64.0	822	1.1
Colombia	7.1	Q3	6.4	6.2	13.1	Dec	10.1	9.5	Nov§	-8.0	-4.7	12.7		387	4,740	-15.4
Mexico	4.3	Q3	3.6	2.8	7.8	Dec	7.9	3.0	Nov	-1.0	-2.5	8.6		71.0	19.0	7.2
Peru	1.7	Q3	1.8	2.6	8.5	Dec	7.8	9.0	Nov§	-3.4	-1.5	7.7		162	3.79	3.7
Egypt	4.4	Q3	na	6.6	21.3	Dec	13.6	7.4	Q3§	-4.6	-7.4	na		na	29.6	-47.0
Israel	7.6	Q3	1.9	6.1	5.3	Nov	4.5	3.9	Nov	3.4	0.2	3.3		211	3.44	-9.3
Saudi Arabia	3.9	2021	na	8.9	2.9	Nov	2.5	5.8	Q3	13.1	3.4	na		na	3.76	-0.3
South Africa	4.1	Q3	6.6	1.9	7.7	Nov	6.9	32.9	Q3§	-1.3	-5.5	9.9		36.0	17.0	-8.4

Source: Haver Analytics. *% change on previous quarter, annual rate. †The Economist Intelligence Unit estimate/forecast. §Not seasonally adjusted. ‡New series. **Year ending June. ††Latest 3 months. ‡‡3-month moving average. §§5-year yield. †††Dollar-denominated bonds.

Markets

In local currency	Index Jan 11th	% change on: one week	Dec 31st 2021
United States S&P 500	3,969.6	3.0	-16.7
United States NAScomp	10,931.7	4.5	-30.1
China Shanghai Comp	3,161.8	1.2	-13.1
China Shenzhen Comp	2,046.8	2.1	-19.1
Japan Nikkei 225	26,446.0	2.8	-8.1
Japan Topix	1,901.3	1.8	-4.6
Britain FTSE 100	7,725.0	1.8	4.6
Canada S&P TSX	20,025.1	2.2	-5.6
Euro area EURO STOXX 50	4,099.8	3.2	-4.6
France CAC 40	6,924.2	2.2	-3.2
Germany DAX*	14,947.9	3.2	-5.9
Italy FTSE/MIB	25,546.9	2.8	-6.6
Netherlands AEX	738.8	3.0	-7.4
Spain IBEX 35	8,726.3	1.9	0.1
Poland WIG	61,279.5	2.6	-11.6
Russia RTS, $ terms	1,002.6	5.5	-37.2
Switzerland SMI	11,246.0	0.9	-12.7
Turkey BIST	4,728.9	-14.4	154.6
Australia All Ord.	7,406.4	2.2	-4.8
Hong Kong Hang Seng	21,436.1	3.1	-8.4
India BSE	60,105.5	-0.9	3.2
Indonesia IDX	6,584.4	-3.4	nil
Malaysia KLSE	1,487.9	1.2	-5.1

	index Jan 11th	% change on: one week	Dec 31st 2021
Pakistan KSE	40,758.2	0.5	-8.6
Singapore STI	3,271.5	0.9	4.7
South Korea KOSPI	2,359.5	4.6	-20.8
Taiwan TWI	14,751.4	3.9	-19.0
Thailand SET	1,685.8	0.7	1.7
Argentina MERV	224,627.5	11.7	169.0
Brazil BVSP	112,517.1	6.8	7.3
Mexico IPC	53,209.0	6.1	-0.1
Egypt EGX 30	15,528.1	-0.2	30.4
Israel TA-125	1,846.0	1.7	-11.0
Saudi Arabia Tadawul	10,617.5	0.8	-6.3
South Africa JSE AS	78,522.1	5.3	6.5
World, dev'd MSCI	2,700.8	2.9	-16.4
Emerging markets MSCI	1,016.9	4.4	-17.5

US corporate bonds, spread over Treasuries

Basis points	latest	Dec 31st 2021
Investment grade	151	120
High-yield	474	332

Sources: Refinitiv Datastream; Standard & Poor's Global Fixed Income Research. *Total return index.

Commodities

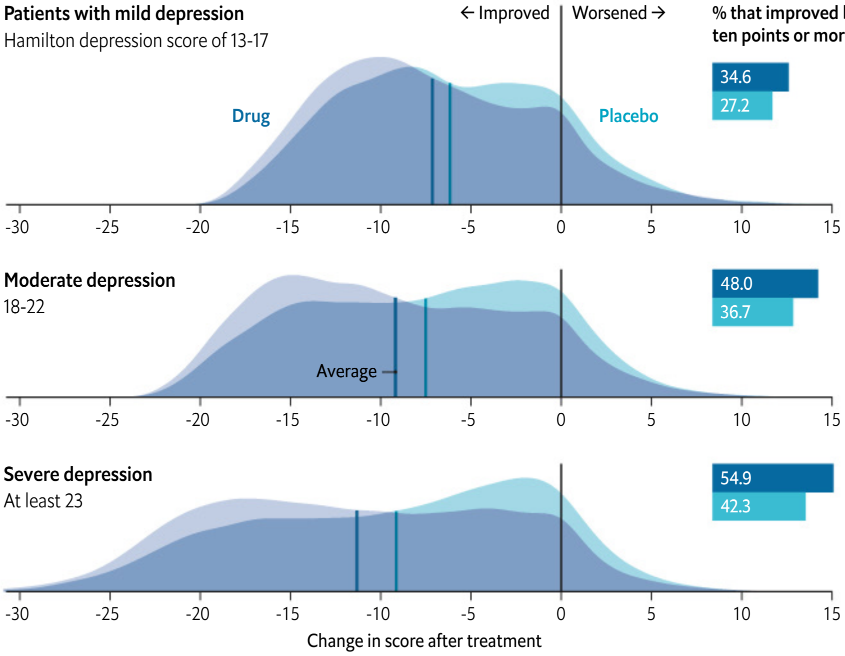
The Economist commodity-price index 2015=100	Jan 3rd	Jan 10th*	% change on month	year
Dollar Index				
All Items	156.2	155.3	2.6	-7.0
Food	142.0	139.4	2.4	-0.8
Industrials				
All	169.5	170.0	2.7	-11.2
Non-food agriculturals	129.6	127.7	-3.5	-24.1
Metals	181.3	182.6	4.1	-7.9
Sterling Index				
All items	198.6	195.1	4.7	4.2
Euro Index				
All items	164.2	160.5	1.7	-1.7
Gold				
$ per oz	1,830.0	1,875.3	3.4	3.4
Brent				
$ per barrel	82.1	80.2	-0.6	-4.3

Sources: Bloomberg; CME Group; Cotlook; Refinitiv Datastream; Fastmarkets; FT; ICCO; ICO; ISO; Live Rice Index; LME; NZ Wool Services; Thompson Lloyd & Ewart; Urner Barry; WSJ. *Provisional.

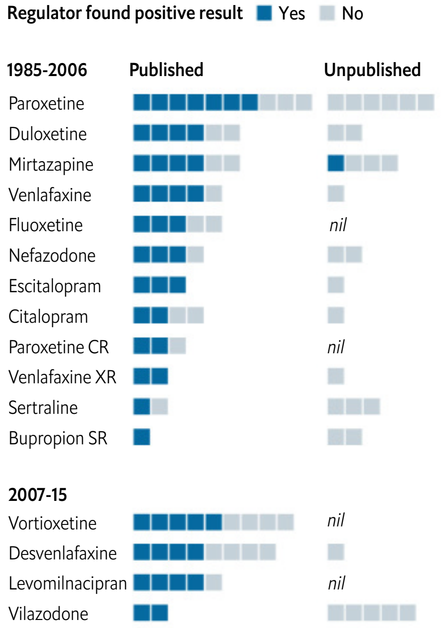
For more countries and additional data, visit **economist.com/economic-and-financial-indicators**

→ On average, antidepressants were only slightly more effective than a placebo

Response to treatment, distribution of 71,393 patients, 1979-2016



Clinical trials on antidepressant drugs



Sources: "Response to acute monotherapy for major depressive disorder in randomised, placebo controlled trials submitted to the US FDA: individual participant data analysis", by M.B. Stone et al., *BMJ*, 2022; "Selective publication of antidepressant trials and its influence on apparent efficacy: updated comparisons and meta-analyses of newer versus older trials", by E.H. Turner et al., PLOS Medicine, 2022

Needles in haystacks

Antidepressants are over-prescribed, but genuinely help some patients

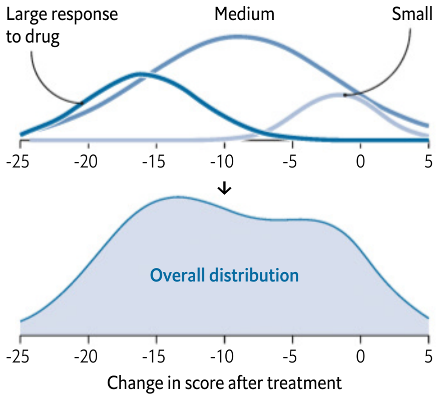
AROUND 10% of Western adults take antidepressants, making them one of the world's most popular types of drugs. On the surface, their prevalence seems hard to reconcile with the underwhelming evidence of their utility. For most people, they are only slightly more effective than a placebo, and can often induce dependency or inflict unwelcome side-effects.

Why, then, are they prescribed so often? A potential explanation is bias in scientific literature, on which doctors rely when deciding on treatment. Studies that make drugs look useful are much more likely to appear in journals than are those showing little effect. One analysis of antidepressants approved by the Food and Drug Administration (FDA) in America found that, among the 51 relevant trials cited in academic papers in 1985-2006, the agency had classified 37 (73%) as yielding "substantial evidence of effectiveness". A further 11 (22%) did not meet this standard, but still touted a positive result—for a different outcome than the one the authors had originally planned to measure.

By contrast, the results of 23 trials of these drugs that went unpublished painted a grim picture. Just one had an FDA-recognised positive finding, reducing the share of such results in the full sample to 51%.

In 2022 the *BMJ* published a breakdown of the full universe of trials filed with the FDA in 1979-2016. It found that placebos replicated most of the pills' benefits. Among mildly depressed patients, who began trials with scores of 13-17 on the widely used Hamilton Rating Scale of Depression, those who got the drugs improved by 7.1 points on average. People given a placebo saw depression decline by 6.1 points, a one-point gap. For severely depressed patients, with starting scores above 22, the difference was a still-modest 2.2 points: 11.3 for the drugs, and 9.1 for a placebo.

Antidepressants appeared highly effective in one subgroup of patients



However, these averages obscure another reason why doctors prescribe antidepressants so often: patients' responses to them vary widely. Rather than a bell curve, the distribution of individuals' results in the *BMJ* study looked like a plateau, with a modest summit at one end. For the drugs, this peak sat on the side representing large reductions in depression. For the placebo, it landed on the side of small declines.

The authors managed to reproduce this pattern by dividing patients into groups that saw big, moderate or negligible improvements, each with its own bell-shaped distribution. They estimated that for 15% of people antidepressants provided large benefits independent of the placebo effect.

Publication bias has shrunk during the past 15 years, thanks to new rules on pre-registering how studies' results will be assessed. Nonetheless, antidepressants remain popular. Because doctors cannot predict whether a given patient is among the 15% helped by the drugs, the only way to find out is to give them a try.

In recent years, researchers have begun searching for psychological and biological traits that tend to show up in patients who reap large benefits from antidepressants. If they succeed, doctors will be able to replace their current trial-and-error approach with data-driven precision. ■

Breaking, making

Vivienne Westwood, designer and iconoclast, died on December 29th, aged 81

NUMBER 430 KING’S ROAD, where London’s Chelsea swerves towards Fulham, was a shop you entered in the 1970s only if you dared. The couple who ran it, Vivienne Westwood and her on-off partner Malcolm McLaren, liked it that way. Shocks to the system were their stock in trade. Any system, more or less.

First the shop had catered to Teddy Boys, then to Rockers. In 1974 it became SEX, with frightening staff who might greet you with a middle finger or a parade of naked rumps. By 1977 it was Seditionaries, a punk shop. More than that, it was the centre of punk’s empire. McLaren had recruited punk’s premier band, the Sex Pistols, who paraded their nastiness on stage by swearing, spitting, reviling the status quo and breaking things. Vivienne, who had appeared in SEX in a see-through rubber negligee, was in charge of their look, and the shop stocked it: ripped shirts and bondage trousers, held together with chains and safety pins. She created the logo too, a brash red A for Anarchy in a crude red circle. It all shouted the glamour of nihilistic destruction.

Back in her dingy Clapham flat, the mood was different. Here she produced much of the stock, labouring with her sewing machine, or dyeing stuff in the bath, to turn bulk-buy T-shirts and leather jackets into garments that were unique. When she designed the ripped shirts she cut them with a couturier’s care. The fabric had to have a dynamic drape, and the edge had to look good ragged. She was a craftswoman. What she created had to be the best.

Making and mending had been dinned in by her factory-worker parents in Derbyshire. She had watched her mother turn out clothes on a treadle machine, and learned how to darn. Sewing and jewellery-making, which she studied, might just about provide a living if she worked hard. Though she was crowned Queen of Punk by the press, her true slogan was never “I wanna be anarchy”. She was too keen on a fine cut and the feel of conservative fabric, like worsted or Harris Tweed. She was also too dedicated. Her favourite motto was one well-suited to her dry northern tones: “You get out what you put in.”

What she put into fashion as the business grew was a mind ablaze with ideas. Most of them were joyously contrarian. When punk’s brief energy fizzled out she turned to heroes and renegades instead, putting the models in her first show in 1981 into pirate boots, billowy trousers and bicorne hats. When fashion went lean and minimalist, at the start of the 1990s, she produced embroidered mini-crinolines, frills and flounces, impossibly high platform shoes (Naomi Campbell fell over in hers) and plastic corsets carrying yards of train. An artist friend, Gary Ness, encouraged her to discover 19th-century France, 17th-century Dutch painting, Russian ballet and Chinese art. She would seize on motifs she saw—such as the slashed-silk clothing of Renaissance soldiers—and boldly use them on viscose or denim.

All through she played with gender, putting women in heavy-shouldered suits and men in lovely kilts and skirts. The public mockery didn’t faze her at all. Those suits made women look important, and there was nothing sexier than that. (Except, perhaps, her phallic key-rings and her T-shirts of Mickey and Minnie Mouse making out.) Some looks misfired, but she produced them so fast that it hardly mattered. She seemed to know better than the young themselves what they were really craving.

Running a business was harder. Early on, she had two sons to bring up; she was sometimes broke and always too busy. But she was reluctant to scale up or send out the work, unless she could find craftspeople good enough. Friends kept her afloat while the enterprise was small. After that, as it grew into an international brand, her main helper and co-designer became her second husband Andreas Kronthaler. He was much younger, her best student when she taught fashion briefly at the University of Applied Arts in Vienna, but they thought exactly alike. With him in charge she could focus on what she really wanted to do: change the world.

She was against pretty much everything. War of course, capitalism, nuclear power, inequality, poverty, austerity, global warming. The world as it was. Her plan to save it—for she had to rebuild as well as knock down—was to stop war, establish that land belonged to no one, give up cars and be altruistic. Simple.

In this battling scenario, fashion was a baddie. The high street was clearly to blame for piles of cheap clothes that people wore once, then threw away. Even she had several rails of clothes she no longer had a use for. Reduce, reuse, recycle was her mantra now. She made her plea on video, not forgetting to flaunt her breasts in a T-shirt emblazoned with the words “BUY LESS”. Looking great could at least get a message noticed. In 2015 she wore a sharply tailored jacket to drive a white tank up to David Cameron’s home in Oxfordshire to show what she thought of fracking.

The true role of fashion, though, went deeper than that. Proper couture like hers was too costly to be consumerist. It was about the fit of clothes to the body, ideally so perfect that it enhanced the experience of life. It was also about fabric that lasted and became a treasure. In 2011, between her campaigning, she was looking for a type of gold ribbon that could be woven with formalised eagles, like a medieval sample she had seen in a book. She could use it as a motif on a sweater, perhaps in some loose-woven fabric in a neutral shade. The contrast would be stark, timeless beauty seen in a new way. Did all ideas come from the young? No! She overturned the world of fashion by cherishing the masters of the past.

In old age she combined completely the roles of wise ancient and fist-waving revolutionary. Her make-up was impeccable, just crayoned with red or blue as she saw fit. Her hair had subsided from fiery to white and her clothes were elegant—until she hitched them up to show bare thighs above black lace socks. The harder she fought against the establishment, the closer it embraced her. In 1992 she became an OBE, in 2006 a dame. On both occasions she went to the Palace in her finest tailoring, and with no knickers on. ■

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